Planetary Health Report Card (Medicine):

Monash University

2024-2025 Contributing Team:

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Land acknowledgment: The Monash University Medical School Planetary Health Report Card team acknowledges the traditional owners of the land on which our university sits, the Bunurong and Wurundjeri people of the Kulin nation. We acknowledge that traditional paradigms of Caring for Country both predate and intersect with Planetary Health, leaving much to be learnt from Aboriginal and Torres Strait Islander ways of being and knowing.

Summary of Findings

Overall Grade	B

Curriculum	C

Monash University includes planetary health in the curriculum. While it is integrated longitudinally across all years of medical school its coverage is minimal. Each year, students receive just one or two lectures on planetary health as part of core teaching.
Recommendations: Monash Medical School should aim to increase the depth of content of planetary health within the medical curriculum. One method may be integrating planetary health directly into education about 'core conditions', in order to highlight clinically relevant links.

Interdisciplinary Research	A

The Planetary Health Division within the School of Public Health and Preventive Medicine, conducts planetary health and healthcare sustainability research. This unit has a website where they provide updates on current research, as well as conferences and workshops.
Recommendations: Monash University should aim to include communities disproportionately impacted by climate change and environmental injustice in regards to the research agenda held at the institution. It would be advantageous to have one centralised website for planetary health, including research opportunities, events, etc.

Community Outreach and Advocacy	B-

The Monash University Medical School has minimal engagement with community outreach and advocacy groups. At present, Monash University contributes to community outreach through:

- Postgraduate courses for healthcare professionals to learn about sustainable healthcare.
- The Nutrition Faculty partners with the Little Food Festival, a community event designed to increase food literacy, human health and planetary health.

Recommendations: Monash University to partner with community organisations to run community-facing courses or events pertaining to environmental health threats. Monash Medical School and affiliated hospitals to have accessible information for both students and patients on issues related to planetary health.

Support for Student-Led Initiatives	B

Monash University and The Monash Medical School has student support groups dedicated to planetary health, namely Doctors For the Environment Australia and Australian Medical Students Association Code Green. However, both are funded externally and lack faculty and student union support. While the university does encourage research and projects targeted towards sustainability, it is very student led.
Recommendations: Student associations for planetary health within the university and medical school should receive faculty and student union support. This would promote increased opportunities for students to engage in planetary health related activities such as research, education and advocacy.

Campus Sustainability	C+

The University has sustainability initiatives, including a Sustainable Development Institute, a net zero emissions target by 2030, and has stated that all campuses would achieve 100% renewable energy use in 2025. Monash University is continuing to divest from fossil fuels.
Recommendations: Monash University should implement measures to ensure that sustainability guidelines are adhered to during university events and implemented in laboratories, and look to implement a more stringent composting program on all campuses. One suggestion is to collaborate with social enterprises, such as *Terracycle*, to repurpose challenging items such as soft plastics, coffee pods, and textiles.

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 school's institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients' health. This preparation is in the hands of the institutions providing our 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) 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.

- **Medical School/Department vs. Institution:** When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine 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 medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions 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.

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

Curriculum: General

1.1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3

Score explanation:
The Monash Medical School does not offer specific electives relating to Education for Sustainable Healthcare (ESH) or Planetary Health. However, there are short courses provided by the University which are accessible to Medical students and function in a similar way to elective courses. These include:

- "Sustainable Healthcare in Practice" short course offered by the Monash Sustainable Development Institute, which comes under the Professional Development and Continuing Education department.
- "Global Health Care Delivery" short course run by Dr Maithri Goonetilike, which is also currently a unit in the Masters of Public Health degree, that covers the health impacts of climate change.

However, it should be noted these courses are not free or included in the Medical School tuition fee, and therefore require medical students to pay out of pocket; this is a significant drawback.

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, 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:	3

Score explanation:
In the first year of the undergraduate stream year 1A, there is a singular planetary health lecture within the subject Health Knowledge and Society (HKS) . This subject also includes a Social Determinants of Health tutorial.

In the second year of the undergraduate stream, year 2A, the subject of Health Promotion discusses the concept of climate change, its impacts on individual and global health, and how it is being tackled on local, national, and global scales. How the medical profession can respond to climate change is also discussed. There is an assignment on concepts related to climate change. The year 2A cohort also receive teaching from DEA (Doctors for the Environment Australia) regarding extreme heat and health with examples from their practice.

The first year of the postgraduate stream, year A provides the subject Health and Society addresses rural health access. More specifically, this topic addresses climate-related impacts on agriculture and mental health impacts on farmers. In addition, there is a Sustainability and Health module, panel discussion, and climate disaster response activity which discusses climatic impacts on health and provision of healthcare.

In the combined postgraduate and undergraduate year 3B, the Occupational and Environmental Medicine (OEM) subject rehashed much of the same ideas as Health Promotion in year 2, this time with a renewed focus on how climate change can drive disruptions to key population groups such as agricultural workers (with the shifts in growing seasons due to a changing climate) and urban dwellers (air pollution and urban heat islands). This subject includes a fortnightly tutorial with an occupational physician to discuss these topics.

All of these topics are examinable.

1.3. Does your <u>medical school</u> 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:	3

Score explanation:
In year 1A, there is a singular planetary health lecture within the subject Health Knowledge and Society (HKS) . This subject also includes a Social Determinants of Health tutorial.

In year 2A, the subject of Health Promotion discusses the concept of climate change, its impacts on people and global health, and how it is being tackled on a local, national, and global scale. How the medical profession can respond to climate change is also discussed.

In year 3B, the Occupational and Environmental Medicine (OEM) subject rehashed much the same ideas as Health Promotion in year 2, this time with a renewed focus on how climate change can drive disruptions to key population groups such as agricultural workers (with the shifts in growing seasons due to a changing climate) and urban dwellers (air pollution and urban heat islands) as well as children (asthma). This subject includes a fortnightly tutorial with an occupational physician to discuss these topics. The effects of major disasters and how healthcare workers can be involved in their management is also briefly covered.

In the postgraduate stream (year A), Health and Society is a subject taught which addresses rural health access. More specifically, this topic addresses climate-related impacts on agriculture and mental health impacts on farmers. In addition, there is a Sustainability and Health module, panel discussion, and climate disaster response activity which discuss climatic impacts on health.

All of these topics are examinable.

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?	
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:
In year 1, the subject Health Knowledge and Society includes a discussion of mosquito-borne diseases, including an explicit mention of climate change as a driver of mosquito-borne diseases. One of the lecture slides mentioned that "Relative increases in ambient temperature, humidity and altered rainfall patterns promote mosquito breeding and increase mosquito burden." As a piece of further reading for the interested, a New York Times article on dengue in a warming world is included in the module.

In year 2A, all students complete an assignment relating to either dengue fever or influenza, which includes material on how climate change continues to influence the patterns of their occurrence.

The year A cohort in Churchill is also provided with a learning module and lectures that broadly covers planetary health, but also has a focus on mosquito borne diseases.

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation:
In year 3B, the subject Occupational and Environmental Medicine (OEM) includes a lecture on Occupational and Environmental Respiratory Conditions which discusses air pollution and how it affects health.

In Year A teaching is provided to the students regarding the environmental impacts of using metered dose inhalers (MDIs) for asthma and COPD, as well as the impact of increasing air pollution on the incidence of respiratory conditions.

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	1

Score explanation:
The cardiovascular health effects of climate change are briefly covered in the curriculum, but to a lesser extent than respiratory impacts. In year 2, a special lecture delivered by two representatives of Doctors for the Environment Australia (DEA) during the Rural Placement week in semester 2 discusses the impacts of climate change on health. It includes one slide on the correlation between extreme heat and myocardial infarction and an explanation of the pathophysiology. However, this is part of a series of webinars about preventative health specifically delivered during the week of rural placement for the students twice a year.

In Year A, a lecture is provided to students regarding the impacts of increasing heat on general health, with a specific mention of cardiovascular health as part of the core curriculum, which is an assessable part of the course.

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: This is briefly addressed in the year 2 Health Promotion (HP) course. In the year 2 HP assignment, students are asked to explain how climate change can impact communities; mental health is included in this conversation. The learning objective that this assignment pertains to is “Discuss the specific direct and indirect impacts of climate change on the population”. The increasing phenomenon of climate related anxiety was also briefly mentioned in a class during the Year 4C psychiatric rotation but was not discussed in detail. This is also discussed as part of a lecture in the Year A curriculum.	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation:
The relationships between health, individual patient food and water security, ecosystem health, and climate change is a key aspect of an activity run in the sustainability and health module which includes a panel discussion and climate disaster response activity within the Year A curriculum.

These relationships are also briefly discussed in the singular Health Knowledge and Society (HKS) lecture on planetary health and in the Health Promotion (HP) subject.

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation:
The disproportionate impact of climate change on marginalised populations is briefly covered in the singular Health Knowledge and Society (HKS) lecture on planetary health, and in the Health Promotion (HP) subject curriculum. One learning objective from the HP curriculum is “explain the relationship between climate change and health inequity”.

In year 1 HKS Module 7: Refugee and Asylum Seeker Health, there is specific mention of how climate refugees are not protected under the UN Refugee Convention (1951), which defines a refugee as someone fleeing persecution or violence. The module discusses, albeit not specifically, how climate refugees who are without legal refugee status, may face indefinite detention with a myriad of physical and mental health impacts.

In the postgraduate stream,within the Health and Society subject, the lecturer provides information on health sociology. They explain that health sociology identifies health illnesses sociologically and explains the disproportionate level of illness affecting certain demographics. This was further discussed with examples on how climate change and extreme weathers affected lower SES communities in rural towns.

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: There is a learning objective specifically related to the topic of inequality linked to climate change in the year 2 Health Promotion course. The learning objective in question is “explain the relationship between climate change and health inequity”. Learning objective 2 and 3 of Health Knowledge and Society module 3 reference how determinants of health, including climate change, can lead to health inequality. Learning objectives 2 and 3 are “outline the wide range of factors interacting to influence health status” and “describe the concepts of health inequality and inequity” respectively. The link between unequal regional health impacts are also discussed through the sustainability and climate change module provided to the Year A cohort in Churchill as part of the Theme II subject Health and Society.	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: The year 4C curriculum includes an eight-week program on Obstetrics and Gynaecology. Teaching across Monash University Medical School makes no specific mention of industry-related environmental toxins (e.g. air pollutants, pesticides).	

1.12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation:
In the postgraduate stream (year A), there is teaching provided to the students regarding the use of MDIs to treat asthma and COPD and its impact on the environment. There is also an informal discussion about the health-related impacts of the Hazelwood mines (which are in close proximity to the Churchill campus), including increased rates of cancer and respiratory conditions.

The core curriculum taught to the undergraduate students does not significantly address any important human-caused environmental threats that are relevant to the university's surrounding community.

1.13. To what extent does your medical school emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0

Score explanation:
The medical school teaches extensively about the gap in health outcomes between Indigenous and non-Indigenous Australians. Students are taught that one of the reasons this gap exists is due to a poor understanding of indigenous culture and views on health from a predominantly non-Indigenous health care system. Indigenous Australians have a stronger connection to land in comparison to non-Indigenous Australians. As a result, Indigenous Australians have learnt how to co-exist with the natural environment in order to thrive, maintain good health, live sustainably and continue to do so. However, the curriculum does not mention how we can promote Indigenous knowledge and value systems for planetary health solutions.

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: To the best of our knowledge, Monash University Medical School does not include anthropogenic environmental toxins on marginalised populations within the curriculum.	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: Across the medical curriculum, there are several references to the benefits of a plant-based diet in reducing cardiovascular risk factors. However, the focus is always on health benefits with no mention of co-environmental benefits. In year 1 Health Enhancement Program (HEP) there is a nutrition lecture that concludes there is “no one answer as to which diet is best” but that guidelines favour a “predominantly plant-based” diet. It states that low intake of vegetables and fruits, and high intake of processed meats, all correlate to adverse cardiovascular health. It also identifies processed meats as a Group 1 carcinogen and favoured consumption of cruciferous vegetables and soy for cancer prevention. In year 4C, under the General Practice (GP) rotation, students are taught that patients with a plant-based diet are at risk of nutritional deficiencies (e.g. iron, vitamin B12, folate), and that it is important to provide supplementation. However, there is no mention of the environmental benefits of a plant-based diet.	

1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: Year 4 Health Economics focuses on reducing medical waste for hospital resourcing reasons rather than carbon footprint reduction.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
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. This is commonly known as social prescribing in the UK. (1 point)	0
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
Waste production within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	0
Score explanation: The Eastern Health Clinical School, within the Faculty of Medicine, Nursing and Health Sciences, delivers a lecture to 3rd and 5th year students titled "No Unnecessary Tests". This lecture covers the health and environmental co-benefits of avoiding over-investigation, discussing the carbon footprint associated with pathology and imaging investigations. The lecture encourages students to	

consider which tests are necessary before ordering them and provides strategies for evaluating this. These include checking consensus guidelines, considering whether the test is likely to impact management, evaluating the risks of performing the test and considering the reliability and pre-test probability of the investigation. Common tests discussed include Urine Microbiology, Culture, Sensitivities (MCS) and pulmonary embolism investigations. The Year 4 GP rotation has a heavy emphasis on avoiding overprescription and intentionally ordering investigative tests, which is discussed in the context of resource waste reduction. There are offhanded references to environmental impacts of medical waste but not within the formal curriculum. The impact of using metered dose inhalers (MDIs) on the environment and its contribution to a growing carbon footprint is also discussed as part of the Year 2A preventative medicine summit that is held twice a year.

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
Score explanation: To the best of our knowledge Monash University Medical School does not include strategies to have conversations with patients about the health effects of climate change in curriculum.	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)	
Only **elective** coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2
Score explanation: In Occupational and Environmental Medicine students are taught how to take and environmental and occupational history which is then practiced through several role plays which focus on taking a history from patients with known exposures.	

In the Year 4 GP curriculum, there is a tutorial involving a simulated patient roleplay with a patient presenting with an occupational exposure to organophosphates. The tutorial was focused on exposure history taking without specific mention of climate change related exposures.

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical 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: Following the completion of the first Planetary Health Report Card, a group of student representatives were able to meet with educators to discuss the outcome of the report card, and manners in which ESH and planetary health could be further integrated into the Monash Medicine curriculum, with educators being very receptive in the feedback and are keen to work with the student group moving forward.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	2
Score explanation: Planetary health/ESH is covered in multiple standalone lectures throughout the degree: ● Year 1: Health Knowledge and Society (HKS) subject has a singular planetary health lecture. HKS also includes a tutorial on Determinants of Health (SDGs). ● Year 2: Health Promotion subject discusses the concept of climate change, its impacts on people and global health, and how it is being tackled on a local, national, and global scale. It further discusses how the medical profession can respond to climate change.	

- Year 3: Occupational and Environmental Medicine (OEM) topic rehashes similar ideas as Health Promotion in Year 2, but with a renewed focus on how climate change can drive disruptions to key population groups such as agriculture (with the shifts in growing seasons due to warming weather) and urban dwellers (air pollution and urban heat islands).
- Year A: Health and Society Subject, Rural Health Access touches on climate-related impacts on agriculture, and mental health impacts on farmers. Within this the Sustainability and Health module, panel discussion, and climate disaster response activity also touch on how the climate impacts health.

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: The Monash University Faculty of Medicine, Nursing and Health Sciences contains both the Monash School of Medicine and the School of Public Health and Preventative Medicine. The latter school has a division dedicated to planetary health. This division coordinates several units, one of which (Occupational and Environmental Health (MonCOEH) is taught within the medical degree.	

Section Total (39 out of 72)	**54.17%**

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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: Researchers from the Planetary Health Division in the Faculty of Medicine, Nursing and Health Sciences have a primary research focus in planetary health. Research from the Planetary Health Division has informed drinking, recycling water and air pollution guidelines, has underpinned updated vaccination policy including in vulnerable patient groups, and generated improvements to prevention programs and better health screening in high risk workplaces. There is also interdisciplinary planetary health research conducted between the Faculty of Pharmacy and Pharmaceutical Sciences and the Faculty of Medicine, Nursing and Health, exploring topics such as the carbon footprint of medication packaging in Australian hospitals, co-designing the infectious disease curriculum with students and scoping review to inform future planetary health multidisciplinary education on antimicrobial knowledge.	

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 School of Public Health and Preventative Medicine (SPHPM) Climate and Health Initiative is made up of infectious disease epidemiologists, environmental health researchers, etc. To quote them: "By combining insights from many disciplines, planetary health promotes an 'eco-social' understanding of health and emphasises the importance of diverse perspectives in creating solutions to problems affecting global public health." (SPHPM - Source).	

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:	2
Score explanation: Monash Sustainable Development Institute (MSDI) has engagement opportunities ranging from industry, government, not-for-profit and community. The Fire to Flourish program works at the intersection of disaster resilience and community development in partnership with communities across New South Wales and Victoria who were affected by Australian bushfires. Fire to Flourish aims to support communities to lead their own recovery, co-create foundations for long-term resilience and wellbeing, and disrupt cycles of entrenched disadvantage. The Program will trial and scale a new model of community-led resilience, amplified through partnerships with government, philanthropic, not-for-profit and private sector organisations.	

Revitalising Informal Settlements and their Environments (RISE) is a research program which trials innovative and sustainable water and sanitation solutions in informal settlements in Fiji and Indonesia. Working with communities, governments, local leaders and global partners, RISE set out to transform human, environmental and ecological health in informal settlements across the developing world.

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 institution has a website detailing the steps being undertaken by the university in order to contribute to environmental sustainability. It is comprehensive in explaining how the campus is striving for sustainability. There is also a separate website in regards to the research done by the university and leaders involved within climate change at the university. The institution has a website for the Planetary Health Division in SPHPM (as mentioned in 2.1) which describes ongoing and past research projects, and the teams involved in these projects. It provides information on various projects related to planetary health, focusing on topics such as the climate and air quality, global and women's health, and infectious disease epidemiology.	

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 / sustianable 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
Score explanation: Monash University held the "Planetary Health Summit and Annual Meeting 2024" conference on the 15th of April, 2024.	

2.6. Is your institution 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
Score explanation: Monash University's Monash Sustainable Development Institute (MSDI) is a part of the Planetary Health Alliance.	

Section Total (16 out of 17)	**94.12%**

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Community Outreach and Advocacy

Section Overview: ***This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health.*** *Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

3.1. Does your institution 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
Score explanation: Monash University demonstrates a strong commitment to planetary health through numerous partnerships and community-focused initiatives based mainly at the Clayton campus. The Monash Sustainable Development Institute (MSDI) leads global and local collaborations aligned with the United Nations Sustainable Development Goals, engaging with partners such as the World Health Organization and local councils to promote sustainability and health advocacy. 'Green Steps' is a 5 day sustainability workshop run by the MSDI partnered with organisations such as Enel Green Power. The workshops allow students to work on various projects and enable them to develop new skills. Upon the conclusion of the program, students will have developed a deeper awareness of planetary health and sustainability in general. Initiatives like the Little Food Festival exemplify Monash's dedication to community outreach by educating children on food system literacy through interactive activities. Its Climate Change Communication Research Hub further enhances public understanding of environmental issues by partnering with local councils and environmental groups. Monash's participation in international climate forums, such as COP29, and its campus-based eco-reconnection programs underline its global and local commitment to planetary health. Through these multifaceted efforts, Monash establishes itself as a leader in fostering meaningful partnerships that advance environmental and community health.	

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: Monash University offers the Net Zero Me online course which can be found and completed on the online learning platform, Moodle. This induction course orientates students on the impacts of and contributors to climate change as well as solutions to address these. Monash Sustainability in Action club based in Clayton also presents multiple events and webinars every year to engage and educate students and staff. Some of these events based at the Clayton campus include Campus Sustainability Tours, Biketober and Plastic Free pop ups.	

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: Oftentimes, communication regarding sustainability and planetary health is not shared amongst the separate campuses and students from different courses at different campuses do not receive the same information. The Monash Sustainability in Action club based in Clayton campus provides regular communications related to planetary health and/or sustainable healthcare to university students and staff. Parkville campus students at Monash University receive occasional communications about planetary health or any form of sustainable initiatives via newsletters from the university, however the information is not regularly communicated.	

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 provider. (1 point)	
There are **no** such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
Score explanation: Sustainable Healthcare in Practice is a short course offered by Monash University and is "recommended for existing health professionals, health educators, aspiring graduate students…". It aims to educate the "knowledge and skills to create an inclusive, equitable, restorative and resilient health system." The Environment and Sustainability Expert Master Degree is another course offered which teaches an "interdisciplinary foundation that allows you to analyse the interdependence of nature, society and the economy." It has five main specialisations that students can learn including environment and governance, corporate environmental and sustainability management, environmental security, international development and environment, and leadership for sustainable development. Sustainable Healthcare Fundamentals is another short course offered by Monash University aimed at "health professionals, non-clinicians, decision-makers, policy makers and those interested in sustainable healthcare", providing information about decarbonisation pathways and principles of a circular economy amongst other concepts.	

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:	0
Score explanation: Neither Monash University nor its affiliated teaching hospitals have easily accessible educational resources regarding environmental health exposure for patients. This is consistent when examining Monash University's other affiliated teaching hospitals.	

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
Score explanation: Neither Monash University nor its affiliated teaching hospitals have easily accessible educational resources for patients regarding the health impacts of climate change.	

Section Total (9 out of 14)	**64.29%**

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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:	1
Score explanation: Monash University and the Medical School do not provide formalised support for sustainability initiatives made by students. However, the institution does have research groups dedicated for planetary health such as the Monash Sustainable Development Institute, where students can reach out to supervisors to help with the various research projects available. These projects are usually voluntary and do not require student funding.	

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:	2
Score explanation: Monash University offers graduate students research opportunities in planetary health/health promotion through Monash Sustainable Development Institute (MSDI). MSDI focuses on	

solution-focused sustainable development and offers scholarships for high quality doctoral research candidates based on merit.

Monash University's Health and Climate Initiative, as part of Monash Faculty of Medicine, Nursing and Health Sciences, focuses on assessing current strategies and developing innovative solutions to mitigate the effects of climate change on health and healthcare systems. Notably, the Monash Biomedicine Discovery Institute (BDI), one of the largest and most prestigious research institutes in the Southern Hemisphere, offers a variety of research opportunities, from Honours and Masters by Research to PhD/Doctorate programs, enabling students to explore a diverse range of health issues.

The 'Human Health and Climate Change Virtual Exchange Program' is available for honours year pharmacy students who are interested in taking part in a Collaborative Online International Learning (COIL) experience.

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: Monash University Faculty of Medicine, Nursing and Health sciences have a 'Health and Climate' section in their research website with information regarding past projects, updates on current initiatives, in addition to contact and background information of climate experts as potential mentors.	

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:	1
Score explanation: Monash University students have a local, student-run branch of the national organisation, Doctors for the Environment Australia (DEA). Although the DEA provides support and funding to the student organisation, Monash University does not. AMSA (Australian Medical Students' Association) has AMSA Code Green, which is a subcommittee that focuses on planetary health. As with DEA, the Monash members of this student run organisation do not receive faculty support.	

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:	0
Score explanation: Monash University does not have a representative in a decision-making council to advocate for curriculum reform and/or sustainability best practice.	

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**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.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
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 explanation:
In the past year, Monash University has run several co-curricular planetary health programs and initiatives, including:

- An Indigenous garden, which cultivates various native plants of cultural and medicinal significance. Additionally, there are various other community gardens across the Clayton campus, which allow for students to grow vegetables and herbs. The Monash Student Society, as a project to tackle growing food insecurity within the student population, runs a fresh food market, which allows students access to fresh fruit and vegetables. There is a non-for-profit vegan and vegetarian restaurant on campus, run by student volunteers, that encourages students to consider sustainability, particularly with a focus on diet.
- Student groups, such as 'Precious Plastics' build community, and encourage students on campus to consider and combat the impacts of, for example, single use plastics, and work towards creating solutions within the Institution.
- Monash PharmAlliance Student Domain based in Monash Parkville Campus organised the Planetary Health Champion Workshop in collaboration with University College London PharmAlliance student domain in 2024. This online workshop aimed to enhance students' understanding on the link between planetary health and pharmaceutical practices through guest speaker's presentation and small-group discussions.
- At Monash University, many panels and discussions are held throughout the year. These lecture series include talks on topics of Climate Justice, Health, Indigenous Justice and Human Rights. These are free for students to attend, regardless of faculty, however do not specifically have a health focus.
- There are various outdoor clubs that are available for students to partake in. These clubs organise various activities such as hiking and snowsport trips, which students can attend.

Section Total (11 out of 15)	**73.33%**

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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 medical 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 institution 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
Score explanation: Monash University has a sustainability-focused institute known as the Monash Sustainable Development Institute (MSDI) involving researchers, students, academics and other professionals. This Institute involves full-time staff with a centralised leadership team. However, this exists externally from the associated teaching hospitals, which do not have designated staff specifically assigned to sustainability.	

5.2. How ambitious is your institution's 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:	5

Score explanation:
Monash University has outlined a detailed strategy to achieve net zero carbon emissions by 2030, and reduce upfront carbon emissions by 20% by 2030. This comprises seven key pillars including energy efficiency measures, campus electrifications, high-performing all-electric buildings, deployment of renewables, intelligent energy networks, net zero emission transport and residual emissions offsetting. The key initiatives of this were approved in 2017 and include implementation of:

- Circular Economy where materials are kept in use, adaptability is optimised and landfills avoided.
- Net Zero where carbon emissions, especially associated with energy use and materials' life cycles, are reduced.
- Nature+ where water use is reduced through fixtures, plumbing and landscaping.
- Health and Wellbeing where a healthy indoor and outdoor environment is maintained for both staff and student holistic wellbeing.

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

Score explanation:
We were unable to find an absolute figure relating to the exact proportion of Monash University's energy being from renewable energy sources. However, Monash University has stated that it would achieve 100% renewable energy for electricity generation, not including heating, in 2025 and, including heating, in 2040. The latest statistics from 2023 show that the figure of overall percentage of renewable energy was 71.3%. Company report | Clean Energy Regulator

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 intitution'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:	2
Score explanation: Monash University has committed to sustainability goals which can be accessed here). These initiatives outline that by 2030: ● All new buildings will be all electric, with rooftop solar. ● All new buildings will be designed to Passive House principles to achieve low energy demands and high occupant comfort. ● Existing campus buildings will be electrified. Since 2018, all new buildings on campus have been all-electric, making 30% of buildings all-electric (renewable electricity generation and heating systems). However, 95 buildings are still using gas heating - they are progressively being converted to renewable electricity heating sources.	

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:
Monash University has set a priority goal of 70% of students and staff commuting to the university via non-single passenger options including public transport, carpooling, bicycles, walking and the shuttle bus service.

Environmentally-friendly and net zero transportation options have been put forward and encouraged by Monash University aspiring for at least 20% of all commuters to use active transport, at least 50% of commuters using public transport and less than 20% of commuters accessing campuses by cars. Furthermore, the current progress that has been achieved includes all of Monash's compatible vehicle fleet and buses are electrified and commuting trips by cars are halved from 2019- and any remaining emissions are currently offset.

A battery-powered bus trial has been launched for two bus routes (601, 630) that shuttle students from Monash University to neighbouring train stations. Electric charging stations for these buses have been installed at Monash University to increase reliability.

Electric charging bays are being installed at both Monash's Caulfield and Clayton campuses which will make Monash University the largest rapid charging hub amongst universities in Melbourne

Monash University also has extensive secure bike facilities across all campuses and also bike rental services. At the Clayton Campus there used to be a bike hub known as BikeCo that provided rentals and acted as a second-hand bike store and bike repair shop. However, it has since closed down due to lack of interested staff.

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:	1
Score explanation: Monash University has a conventional recycling program, but is currently lacking a widespread composting program. However, the university is "currently developing a plan to increase food waste collection" within their campuses.	

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 a**dequate s**ustainability 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:	1
Score explanation: Monash University has published guidelines for sustainable eating/drinking and catering. However, it is unclear whether the Monash University Medical School follows these guidelines during events. There has been mixed feedback from students regarding the sustainability of events and therefore, it is likely that these sustainable guidelines are not strongly adhered to.	

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:	1
Score explanation: Monash University has a website page that outlines the University's dedication to sustainable supply procurement however it does not go in depth regarding it, and also does not show desire to increase the sustainability within the supply chain.	

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: While it is not highly incentivised by the institution, Monash University does have sustainability guidelines for events. These guidelines are not strictly adhered to at university events but do exist nonetheless.	

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:	0
Score explanation: The Monash University Medical School does not currently have many programs or initiatives that aim to make lab spaces more sustainable. Although a lab induction program exists for all preclinical students, environmental sustainability is not referenced specifically during these induction modules. However, the Centre for Human Anatomy Education building was Monash's first all-electric building designed for high energy efficiency and storage using Passive House principles.	

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: Monash University has a policy to divest from fossil fuels which was formalised first in 2016. This commitment was then reaffirmed in an ESG statement in 2021. There has been no official statement from the institution on whether or not the University has entirely divested from fossil fuels, however, it has been stated that Monash University has 100% divested from coal.	

Section Total (18 out of 32)	**56.25%**

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Grading

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

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

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(38/72) x 100 = 52.78%	C
Interdisciplinary Research (17.5%)	(16/17) x 100 = 94.12%	A
Community Outreach and Advocacy (17.5%)	(9/14) x 100 = 64.29%	B-
Support for Student-led Planetary Health Initiatives (17.5%)	(11/15) x 100= 73.33%	B
Campus Sustainability (17.5%)	(18/32) x 100 = 66.25%	C+
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 66.65%**	**B**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which Monash University has participated in the Planetary Health Report Card initiative.