Planetary Health Report Card (Medicine):

University of Melbourne

2024-2025 Contributing Team:

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Land acknowledgment: We acknowledge the Traditional Owners of the unceded land on which University Of Melbourne Medical Students learn and live throughout Victoria, including the Wurundjeri Woi-wurrung and Bunurong Peoples, the Yorta Yorta Nation, Wadawurrung People, Dja Dja Wurrung People, Taungurung People. We pay our respects to Elders past and present. We appreciate First Nations peoples' deep knowledge of country and its relationship with human and non-human health, and recognise the significance of this knowledge in teaching, learning and practising Planetary Health.

Summary of Findings

Overall Grade	B

Curriculum	C+

Planetary health concepts are incorporated at numerous points throughout the degree but are only briefly covered and not coherently connected or given sufficient emphasis, although sustainability is a stronger area. The inclusion of Planetary Health Content as a Day Theme ('Medicine in the Anthropocene') during the student-organised 2024 Doctor of Medicine Student Conference (MDSC) is indicative of student interest in planetary health, but unlikely to be repeated as a theme for the next several conference cycles. There has not been significant improvement in Curriculum since the 2023-24 report card.

Recommendations: We recommend the integration of Planetary Health content into both the existing and new curriculum. Student input on a curriculum working group would help enable collaboration and ensure the curriculum is in line with the new Australian Medical Council's medical school standards.

Interdisciplinary Research	B

The university has numerous faculty members and dedicated institutes with a research focus in planetary health and sustainable healthcare. Additionally, consistent growth in these fields is evident in the increasing availability of projects and research groups. However, there are currently no processes in place to engage the most affected communities in agenda setting.

There are other examples from the university where this principle is being applied, and planetary health research projects could learn from these methods. Additionally, there is no user-friendly, centralised website that collates all of the planetary health research projects, institutes and events.

Recommendations: We commend the present research focus on sustainable healthcare and planetary health, and encourage the continuation of this. Incorporation of the most affected communities into setting of the research agenda would be a welcome and vital addition. The development of a centralised website to access information about the various research (past, present and upcoming), study and public opportunities would allow for greater engagement from the broader university.

Community Outreach and Advocacy	B

This year, the institution demonstrated ongoing collaboration with the Climate CATCH (Collaborative Actions for Transformative Change in Health and Healthcare) Lab, and Healthcare Carbon Lab, as well as community partners such as Doctors for the Environment Australia (DEA) and the Climate and Health Alliance (CAHA). The Institution also provided courses relating to planetary health and sustainable healthcare that were public facing.None of these were offered by the MMS specifically. The institution and affiliated teaching hospitals largely did not provide accessible educational materials to patients pertaining to the health impacts of environmental exposure or climate change.

Recommendations: We recommend stronger communication to the community regarding the health impacts of environmental exposure and climate change. Making resources such as Bendigo Hospital's Climate Change and Health Pamphlet more readily available to the community would aid advocacy greatly.

Support for Student-Led Initiatives	B

On balance, the University excels in providing financial and academic support for sustainability initiatives such as the Melbourne Climate Futures Australian Government Research Training Program Scholarship and Wattle Fellowship. However, only 3 medical students were engaged in either program in 2024. Research opportunities are strong; however, none of these opportunities are specifically dedicated to planetary health.

The University has web pages dedicated to planetary health-related activities and groups such as the Climate CATCH lab, and events such as the student-led 'Students in Sustainable Healthcare'. There are also student organisations dedicated to planetary health in healthcare but it lacks faculty support such as the Doctors for the Environment Australia (DEA) Student Group. Furthermore, there are student clubs that do address sustainability, however none are dedicated to planetary health. Additionally, there is no student sustainability representative sitting on an institutional level decision making board. Addressing gaps in faculty-supported student groups, student representation, and connections with already established environmental justice communities locally would further strengthen support for students.

Recommendations: We recommend the development of a mentor directory to better connect students with supervisors for projects or other methods of creating more opportunities to have sustainability oriented MD4 research projects in the MD. We recommend establishing a faculty-supported student group dedicated to planetary health activities with student representatives that can represent sustainability interests at a faculty or institutional level. Finally, we recommend considering opportunities for students to collaborate with local environmental justice communities to connect with the local sustainability movement.

Campus Sustainability	B

The UoM has demonstrated initiative in campus sustainability, particularly with the design of new buildings, ambition for carbon neutrality and carbon positive status, recycling and waste programs, and sustainable transport. Increased transparency on the retrofitting status of older UoM and MDHS buildings would be beneficial to appreciate the emissions intensity of the entire campus. The gas usage within existing buildings, such as the Medical Building, was not able to be ascertained. Increased efforts to electrify and improve the energy efficiency of existing buildings is key to reducing the campus's overall emissions.

Recommendations: We recommend ongoing electrification of campus and clarity on the retrofitting status of the UoM existing buildings, including the MDHS buildings.

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 develiered 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 Melbourne Medical School (MMS) MD program (redesigned as of 2022) offers MD1 (First Year MD Program), MD2 (Second Year MD Program) and MD3 (Third Year MD Program) students the ability to undertake optional selective courses in environmental sustainability and planetary health, as part of the MD Discovery program. None of these elective subjects are exclusive to MMS students, rather, they are developed by other schools in the Faculty of Medicine, Dentistry and Health Sciences (MDHS) and available for students in the MD program.

Taken directly from the Melbourne Medical School Discovery subject website: these *"Faculty Selectives are governed outside the Doctor of Medicine and as such the department, School or Faculty that are responsible for these subjects have full oversight of the curriculum, teaching, learning and assessment."*

The elective subjects offered in the Discovery program for MD1 & MD2 students in 2024 were:
- Climate Change and Health - from: Graduate certificate of Climate Change and Health
- Planetary and Global Health - from: Melbourne School of Population and Global Health
- Sustainability and Healthcare - from: Melbourne School of Population and Global Health
- Foundations of Public Health - from: Melbourne School of Population and Global Health

Curriculum: Health Effects of Climate Change

1.2. Does your medical school 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:	1

Score explanation:
The MMS MD program did not cover this topic in the core curriculum.
However, the MD offers MD1, MD2 and MD3 students the ability to undertake elective (selective) courses in environmental sustainability and planetary health, known as the MD Discovery program. However, none of these elective subjects are exclusive to Melbourne MD students – rather, they are developed by other schools in the Faculty of Medicine, Dentistry and Health Sciences (MDHS) (e.g., the MSPGH - Melbourne School of Population and Global Health) and available for students in the MD program who are interested in this topic to optionally undertake.

The elective subjects offered in the Discovery program for MD1 & MD2 students in 2024 were:

- Climate Change and Health - from: Graduate certificate of Climate Change and Health
- Planetary and Global Health - from: Melbourne School of Population and Global Health
- Sustainability and Healthcare - from: Melbourne School of Population and Global Health

Optional session at the MDSC (Doctor of Medicine Student Conference: a compulsory intensive subject attended yearly by all MD Students, coordinated by MD Students) included:

- Changing Tides, Changing Symptoms: Navigating the Waters of Emerging Health Presentations.
- Wow, it's Hot Out Here: Climate Change and Rural Health.
- Temperature Jumps and Baby Bumps: How Climate Change Is Impacting Maternal and Foetal Health.

However, these were topics specifically for the 2024 MDSC and will not be repeated in future years. It is significant to note that the topics covered and overall organisation of MDSC was student driven.

1.3. Does your medical 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

Score explanation:
The MMS MD program provided one related public health lecture in MD1, titled "Introduction to Population, Global and Public Health". The risks associated with recent extreme weather events including floods and fires are mentioned, but there is no detail nor explanation of the nature of these risks or their impacts on individuals or healthcare systems.

Additionally, in the MD3 obstetrics/gynaecology rotation, there is a single lecture, titled "Lactation and Breastfeeding", which contains several slides discussing breastfeeding in the context of disruptive events like natural disasters, including climate associated disasters.

In MD4, this was briefly implied, but not explicitly covered within Evidence Based Medicine tutorials, with one slide of one lecture alluding to extreme weather events and consequent health impacts.

Additionally, these topics are covered in elective coursework and optional MSDC sessions.

1.4. Does your medical school 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:	1

Score explanation:
The MMS MD program did not cover this topic in the core curriculum.
However, the MD offers MD1 and MD2 students the ability to undertake elective courses in environmental sustainability and planetary health, via the MD Discovery program. However, none of these elective subjects are exclusive to Melbourne MD students – rather, they are developed by other schools in the Faculty of Medicine, Dentistry and Health Sciences (MDHS) (e.g., the MSPGH) and available for students in the MD program who are interested in this topic to optionally undertake.

The elective subjects offered in the Discovery program for MD1 & MD2 students in 2024 were:
- Climate Change and Health - from: Graduate certificate of Climate Change and Health
- Planetary and Global Health - from: Melbourne School of Population and Global Health
- Sustainability and Healthcare - from: Melbourne School of Population and Global Health

Additionally, impacts of climate change on infectious disease patterns was covered in an optional session at the MDSC (Student Conference), '*Changing Tides, Changing Symptoms: Navigating the Waters of Emerging Health Presentations'*. However, this was a session specifically for the 2024 MDSC and will not be repeated in future years. It is significant to note that the topics covered and overall organisation of MDSC was student driven.

1.5. Does your <u>medical school</u> 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:	2

Score explanation:
The MMS MD program has several brief mentions scattered across lectures throughout MD1-3 on environmental factors such as pollen, weather and thunderstorm asthma, as potential contributors to respiratory conditions such as COPD, asthma and lung cancer. Notable lectures briefly mentioning this topic include:

- MD1 - “Lung and Pleural Tumours”
- MD1 - “Drugs Affecting Airway Structures”
- MD2 - “Asthma for the clinician”
- MD2 - “Diagnosing COPD”

There is no further significant exploration of respiratory health in the context of planetary health, including bushfire smoke, despite its local significance in Melbourne/Victoria.

1.6. Does your <u>medical school</u> 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:	1

Score explanation:

To the extent of our knowledge, the MMS MD program did not cover this topic in the core curriculum, beyond obvious links between extreme weather/heat exposure, and vasovagal syncope. However, the MD offers MD1, MD2 and MD3 students the ability to undertake elective (selective) courses in environmental sustainability and planetary health, known as the MD Discovery program. However, none of these elective subjects are exclusive to Melbourne MD students – rather, they are developed by other schools in the Faculty of Medicine, Dentistry and Health Sciences (MDHS) (e.g., the MSPGH) and available for students in the MD program who are interested in this topic to optionally undertake.

The elective subjects offered in the Discovery program for MD1 & MD2 students in 2024 were:

- Climate Change and Health - from: Graduate certificate of Climate Change and Health
- Planetary and Global Health - from: Melbourne School of Population and Global Health
- Sustainability and Healthcare - from: Melbourne School of Population and Global Health

Additionally, cardiovascular health effects of climate change was covered in an optional session at the MDSC (Student Conference), '*Changing Tides, Changing Symptoms: Navigating the Waters of Emerging Health Presentations'*. However, this was a session specifically for the 2024 MDSC and will not be repeated in future years. It is significant to note that the topics covered and overall organisation of MDSC was student driven.

1.7. Does your medical 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:	2

Score explanation:
The MMS MD program explores the broader impacts of climate change and the health of Country on social and emotional wellbeing for First Nations communities. This is covered as a part of the First Nations Health content run by the Wurru Wurru Health Unit, in the context of social determinants of health. In particular, the topic was briefly covered in the MD3 lecture:*" The role of institutions in the health and wellbeing of First Nations peoples"*. However, this content addresses these issues within a specific cultural context, and is not necessarily generalisable to understanding mental health and neuropsychological effects within the general population.

Furthermore, there was a MD3 lecture that briefly covered the damaging effects of air pollution on dementia, titled "*Ageing population and dementia epidemiology*". The information was also mentioned in a single dot-point in a list of non-modifiable risk factors in the lecture "*Health promotion across the lifespan in General Practice"*

There is no detailed discussion on the effect of local environmental degradation, such as desertification of the Murray-Darling Basin, or of climate change related natural disasters, such as the 2019-2020 bushfires, on the mental health of the general Australian population. This content was also covered in elective subjects.

Additionally, the impacts of climate change on mental health was covered in an optional session at the MDSC (Student Conference), *'Eco-Distress and Climate Anxiety: How to Manage BIG Feelings Around BIG Changes in the Climate'*. However, this was a session specifically for the 2024 MDSC and will not be repeated in future years. It is significant to note that the topics covered and overall organisation of MDSC was student driven.

1.8. Does your medical school 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. (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 MMS MD program included one relevant public health lecture in MD1, titled "Introduction to Population, Global and Public Health". The concept of the relationship between population health, ecosystem health and climate change was briefly introduced, however, did not involve significant detail or examples of this relationship. In the MD1 public health tutorial, "Challenges for Global Health", the impacts of seasonal water supply was listed as a potential impact on food security and human health. Students also complete a causal pathway ePortfolio assignment which covers social and environmental including climate) determinants of health. Additionally, food and water security was discussed briefly in the MD3 "Lactation and Breastfeeding" Lecture.	

1.9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
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 points)	
This topic was **not** covered. (1 points)	
Score Assigned:	2
Score explanation: The MMS MD program explores the broader impacts of climate change and the health of Country on social and emotional wellbeing for First Nations communities. This is covered in MD1, MD2 and MD3 as a part of the First Nations Health content run by the Wurru Wurru Health Unit, in the context of social determinants of health. There was also a relevant Discovery elective offered for MD2s, titled "On Country for Health" that briefly covered this content. There is no significant mention of the disproportionate impact on other marginalised groups, such as rural and remote communities.	

Additionally, the disproportionate impacts of climate change on marginalised populations was covered in optional sessions at the MDSC (Student Conference),

- *'Wow, it's Hot out Here: Climate Change and Rural Health'*
- *'Climate Change and Connection to Country: A First Nations Health Perspective.'*

However, these were sessions specifically for the 2024 MDSC and will not be repeated in future years. It is significant to note that the topics covered and overall organisation of MDSC was student driven.

1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?	
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:	1

Score explanation:
To the extent of our knowledge, the MMS MD program did not cover this topic in the core curriculum, beyond obvious links between extreme weather/heat exposure, and vasovagal syncope. However, the MD offers MD1, MD2 and MD3 students the ability to undertake elective (selective) courses in environmental sustainability and planetary health, known as the MD Discovery program. However, none of these elective subjects are exclusive to Melbourne MD students – rather, they are developed by other schools in the Faculty of Medicine, Dentistry and Health Sciences (MDHS) (e.g., the MSPGH) and available for students in the MD program who are interested in this topic to optionally undertake.

The elective subjects offered in the Discovery program for MD1 & MD2 students in 2024 were:

- Climate Change and Health - from: Graduate certificate of Climate Change and Health
- Planetary and Global Health - from: Melbourne School of Population and Global Health
- Sustainability and Healthcare - from: Melbourne School of Population and Global Health

Additionally, MD4s in 2024 had an opportunity to undertake an international elective, providing students the chance to compare delivery of healthcare in developing countries and low-resource settings affected by more extreme climates. These experiences offer first hand exposure to the global impact of climate change on regional and rural communities outside of Australia. Ultimately, participation in these international electives relies on a students' individual initiative and financial resources, and international elective opportunities will be removed from the MD Program in 2025/ongoing.

1.11. Does your medical school 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. (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: To the best of our knowledge, the MMS MD program and elective options did not cover this topic.	

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. (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: As recognised in 1.5, there are brief explorations of thunderstorm asthma as a locally relevant condition, but limited exploration of the environmental mechanisms contributing to it. In the MD3/MD4 Sustainability Modules, and the lecture "*Junior doctors practising high quality, low carbon medicine*", there were brief references to local examples of healthcare related environmental impacts.	

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. (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 University of Melbourne has a dedicated Wurru Wurru Health Unit which delivers integrated learning around the importance of Indigenous knowledge systems throughout MD1-MD4.

The Wurru Wurru Health Unit's teaching across all year levels provides particular recognition of the health of Country as a determinant of health for First Nations Peoples. It is noted as a key determinant of health in the Wurru Wurru Health Model. Cultural immersion activities such as Bunjilaka and Bilibellary's Walk provide discussion on the importance of the health of Country to overall well-being.

However, planetary health education currently lacks coherent integration of Indigenous knowledge, especially in discussions regarding planetary health solutions. Planetary health concepts are presented in the form of environmental determinants of health for First Nations people that can be utilised in public health solutions, but there the inverse relationship is not explored, i.e. the importance of Indigenous knowledge and values for planetary health solutions.

1.14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
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:
To the extent of our knowledge, the MMS MD program only extremely briefly covered this topic in the MD2 core curriculum. This was in a lecture titled 'COPD', where there is a one-line reference to an increased risk of respiratory disease in low-socioeconomic settings where indoor biomass fuel burning exposure is more common.

Furthermore, this topic was covered in-depth in the following Faculty Selective elective subject:
- Foundations of Public Health - from: Melbourne School of Population and Global Health

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. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: In MD1, the *'Food and Nutrition 101'* lecture had two slides on environmental and health effects of plant based diets, and referenced the Lancet Planetary Health Diet. The First Nations Health lecture *'Traditional Bush medicines and Nutrition'* discussed the health impacts of traditional oriented lifestyles/diet compared to a modern agricultural/processed diet, and their impact on sustainable land management. However, this was not specifically about plant-based diets, rather 'balanced omnivorous diets'. Additionally, the environmental and health co-benefits of plant based diets was covered in an optional session at the MDSC (Student Conference), *'A Recipe for a Healthy Planet: Sustainable and Eco-Friendly Eating.'*. However, this was a session specifically for the 2024 MDSC and will not be repeated in future years. It is significant to note that the topics covered and overall organisation of MDSC was student driven.	

1.16. Does your <u>medical school</u> 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:	3
Score explanation: The MMS MD program extensively addressed the carbon footprint of the healthcare systems in core content across the year levels. This topic was explored in great depth across the following resources: ● MD3 Evidence Based Tutorial on Sustainability ● MD3 Activity 'Unnecessary testing in General Practice' ● MD3/MD4 General Practise Module 3 Focus Case*	

- MDSC Keynote Presentation: "*We must do what is necessary to avoid an unsustainable catastrophe*"

*Note that this content was delivered to class of 2024 MD4s as recorded lecture undertaking the previous version of the MD, but has been moved into modules for MD3 as per the new model MD, which came into effect with the class of 2025; thus there was a 'double up' in 2024-2025.

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> 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) .	0
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)	1
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)	1
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)	1

Score explanation:
Concepts from Australia's Choosing Wisely initiative are integrated throughout the MD program, particularly emphasized during MD4's Evidence-Based Medicine tutorials for trainee interns. Judicious investigation ordering and avoiding overtreatment are considered fundamental internship skills. It is similarly covered in MD3 lectures and activities. While over-prescribing pharmaceuticals is acknowledged in relation to polypharmacy and its health risks, its environmental impact as a climate health harm is not explicitly addressed. This is an important perspective to integrate into future medical education.

The concepts of social prescribing are commonly integrated under the general management principle of trialling 'lifestyle' measures first-line where appropriate, although the environmental co-benefits are not explored.

Teaching on surgical healthcare and its environmental impact are explored in the MD3 Sustainability module, particularly in discussing sterilisation and reusable equipment. Anaesthetic gas choices, inhaler choice optimisations and waste minimisation are typically covered as examples within Evidence Based Medicine tutorials in MD4 and MD3 Sustainability modules.

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) - No	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points) - No	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
Score explanation: There are no strategies introduced for having conversations with patients about climate change within the current MD curriculum. In the elective subject '*Sustainability and Healthcare*', there is a lecture which outlines common Climate Change-related health conditions impacting the community and the importance of informing the public of these. This lecture conveyed that healthcare professionals want to inform their patients of climate-related health risks, particularly heat-related and mental health conditions. However, this lecture does not introduce strategies to have conversations with patients about these health effects.	

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 MD1, Foundations to Clinical Practice, there is a clinical skills tutorial in week 6 on interviewing a patient on the cardinal features of dyspnoea. This includes environmental factors that may predispose to, or worsen dyspnoea such as chemicals, paint, asbestos and tobacco smoke. These include pollen, dust, smoke and pet dander, however, there is limited discussion on climate-related exposures such as bushfire smoke and mould from flooding. Further, histories that are tailored to presentations such as extreme weather events, ecoanxiety, and other climate-related pathologies are not covered. Additionally, there is a clinical skills tutorial in week 9 on interviewing a patient on the cardinal features of asthma and particularly taking an occupational and social history. We believe that environmental history taking should be given greater emphasis in core curriculum with reference to non-occupational and climate change related environmental exposures, as these exposures are increasingly relevant to presentations beyond pulmonary disease.	

Curriculum: Administrative Support for Planetary Health

1.20. Is your medical school 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: There are current, ongoing discussions with faculty – primarily student-led and endorsed by several faculty members – to implement robust ESH/planetary health education across the year levels, such that it features as a key theme of the MD course. Currently, there is an acknowledgement by Melbourne Medical School (MMS) that ESH/planetary health should be part of the core-curriculum rather than only elective subjects – particularly in light of the new changes to the accreditation standards of Australian Medical Schools developed by the Australian Medical Council (AMC), which took effect in 2024. Whilst there are current efforts to expand the climate health curriculum, changes are expected to be gradual across several years of the education accreditation period. Some initial work has included discussions on creating a review taskforce with students and faculty members, to evaluate and appraise the current curriculum and make recommendations on the future direction of ESH/planetary health education implementation. There was engagement but limited tangible action resulting from last year's inaugural report card. We hope to be able to witness major improvements in the near future, such as the release of a formalised, concrete strategy released to be acted on.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core 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: The intermittent integration of planetary health content throughout the course is up to the discretion of individual lecturers, and does not constitute longitudinal integration. As noted in 1.13, First Nations health content provides some reference to planetary health across all year levels. After a brief mention in introductions to public health principles in MD1, the theme does not recur until a standalone lecture in MD4 (old curriculum model) and MD3 (new curriculum model). There is poor integration of planetary health and ESH into course learning outcomes overall.

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:	0
Score explanation: There is no singular lead within the University of Melbourne dedicated to the curricular implementation of ESH/Planetary Health. To the best of our knowledge, there is no specific staff member assigned to this role. There are several planetary health champions within the faculty of the MMS, however, they are not formally tasked with overseeing the implementation of planetary health for the medical-student curriculum. There are positive signs that this may change next year.	

Section Total (40 out of 72)	**55.56%**

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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: In 2024, the Department of Critical Care, within MMS, launched the Healthcare Carbon Lab. There are three faculty members within this lab whose research focus is sustainable healthcare, including the inaugural Associate Dean Sustainable Healthcare. Their work focuses on building a life cycle assessment inventory of healthcare services and equipment. The Department of Critical Care has numerous other faculty members whose research focuses on sustainable healthcare. This includes the Enterprise Professor in Sustainable Healthcare, Senior Fellow Sustainability, Climate and Health, Senior Fellow Sustainable Healthcare amongst others. Many of these doctors are also involved in Doctors for the Environment Australia, and various working groups for planetary health with other medical organisations and specialty colleges. There are also members of the School of Population and Global Health and Melbourne Climate Futures (outside of the Faculty of MDHS) whose research focus is planetary health, from mental health, to disaster recovery, and education.	

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:
Melbourne Climate Futures (MCF) is an interdisciplinary initiative established by the University of Melbourne which is dedicated to climate change research and engagement across faculties, schools, and departments. MCF "*connects and amplifies the depth and breadth of University of Melbourne research, creates a portal to share ideas and collaborate on real action, and empowers the next generation of climate activists.*" The initiative partners with various institutions in the university to coordinate research and engagement on key research themes around climate change.

The Health, Wellbeing and Climate Justice research theme runs several projects researching the intersection between climate change and health and facilitating the development of healthy climate policies. This program has recently established the Earth System Governance (ESG) Working Group on Planetary Health Justice which aims to further support interdisciplinary research on planetary health and "*extend the existing ESG planetary justice research framework by applying a health lens.*"

The Climate CATCH Lab is a joint initiative of the School of Population and Global Health, Melbourne Medical School, and Melbourne Climate Futures at the University of Melbourne. It is a "*collaborative interdisciplinary network of researchers, educators, practitioners … advancing knowledge and action at the nexus of climate change and health.*" The initiative focuses on climate change from a health systems and community health lens, and conducts multidisciplinary research across nine streams, including Sustainable Healthcare and Health Impacts of climate change.

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:	0

Score explanation:
To the best of our knowledge, the University does not currently have any process for disproportionately affected communities to have input or decision-making power in the institution's research agenda. While the institution is making vital first steps with co-design approaches in multiple research projects, there are currently no efforts to transition from co-design projects to groups advising agenda or being involved in decision making .

However, the University of Melbourne has several research groups and projects using co-design approaches which encourage engagement with and contributions from community collaborators. Examples of such include:

- Climate CATCH Lab is funding The Futures Collective, which aims to bring climate and sustainability researchers together with key stakeholders within impacted communities.
- Young People's Climate Superpowers and 'Linking Infectious Diseases and Disasters in a Changing Climate' and 'Climate Anxiety, Disasters, and Humanitarian Migrants in Regional Australia', in the MSPGH's Seed Funding
- The Urban Resilience and Innovation Program in the Melbourne Centre for Cities.
- The University has a framework for Indigenous Research, with a strong focus on community collaboration, however, this does not outline opportunities for non-academics to influence research agendas.

While the above examples of co-design allow affected communities engagement in University of Melbourne research, this is after the agenda of the research has been set. Thus, the priorities of affected communities may fail to be adequately addressed and as such do not fulfil this criteria.

Alternatively, there are examples of co-design and collaboration that involve agenda setting and decision making capacity within the University, but these do not have projects focusing on planetary health or communities disproportionately affected by climate change and environmental justice. These include, The Social Equity Institute has a commitment to co-design and collaboration, The institute's Community Fellows Program allows research agendas to be set by communities. The Co-Design Living Lab Program, as part of the ALIVE National Centre for Mental Health Research Translation, part of the Melbourne Medical School's Department of General Practice and Primary Care, has created a strong model for research that involves people with Lived Experience in End-To-End design and translation of research, including priority setting.

The work done by these two groups provides strong theoretical exploration and models which have potential to be utilised across the institution in the future, if appropriate efforts are made to do so.

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:	2

Score explanation:
We acknowledge the difficulty of centralising research, events, and opportunities across the multiple centres and institutions engaging with health and the environment within the University of Melbourne. Currently, research and resources related to health and the environment can be found in various university web resources.

Regarding campus resources on the environment, the Sustainability at Melbourne website contains university resources on climate change and sustainability research, with links to key research groups such as Melbourne Climate Futures (MCF) (see below), education and research opportunities, and projects aligned with the university's sustainability framework. In addition, the Sustainable Campus website, primarily student-run, serves as a general noticeboard for sustainability news and events at the university and provides resources for students on how they can contribute to a more sustainable campus.

MCF is a resource which features news, events, and research related to climate change at the university. Under the "*Expertise*" header, there are hyperlinks to MCF Discussion Papers written by academics, as well as the research themes of MCF climate research. The News and Events section is also updated with articles featuring climate change research findings. However, this is not specific to health related topics nor planetary health, and thus does not fulfil this criteria.

The MCF does provide information on the Health, Wellbeing and Climate Justice research stream. Additionally, the MCF links to the Climate CATCH Lab page. This features several research projects related to health and the environment in each of its research streams. However, these are not comprehensive nor easy to navigate.

The Medical School also has a webpage via the Department of Critical Care 'Sustainable Healthcare' with information on research, staff members and news.

We recommend creating a regularly updated and accessible web page that centralises information on Planetary Health in a more streamlined and specific capacity.

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:	3

Score explanation:
The university hosted various seminars and public lectures on topics related to planetary health, as described in 3.2. Whilst there were no specific conferences or symposia on topics related to planetary health, there were relevant events specific to sustainable healthcare, including:

- MMS sustainability healthcare team, in collaboration with St Vincent's Hospital, held a quarterly Sustainability Grand Round throughout 2024. This was open to researchers, clinicians and students alike.
- MDHS hosted a panel discussion "'First Do No harm: Is Sustainable Healthcare the Prescription for the Future?" in 2024

Furthermore, there are student-led events, such as the MDSC, a student-led conference that is a compulsory intensive subject for all MD students. One of the four days in 2024 was themed 'Medicine in the Anthropocene' and did include both sustainability and planetary health topics. However, we do not feel this satisfies this criteria as it should be understood as a non-traditional teaching event restricted to students, rather than a true conference or symposium for collaboration and knowledge sharing between interdisciplinary researchers and practitioners. We find that it would be disingenuous to use this event to satisfy criteria for both the curriculum section as teaching and the interdisciplinary research section as a conference.

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: The Climate CATCH Lab is a member of the Planetary Health Alliance (PHA), the Alliance for Transformative Action on Climate and Health (ATACH), and Global Green and Healthy Hospitals	

Section Total (12 out of 17)	**70.59%**

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Community Outreach and Advocacy

Section Overview: ***This section evaluates institution 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: The medical school is involved in the joint initiative Climate CATCH (Collaborative Action for Transformative Change in Health and Healthcare) Lab, alongside the University of Melbourne School of Population and Global Health (MSPGH) and Melbourne Climate Futures (MCF), which 'seeks to accelerate the University of Melbourne's climate change and human health research, engagement and education for enhanced impact." It has numerous governmental and community partnerships, including Climate and Health Alliance (CAHA) and Doctors for the Environment Australia (DEA). A secondary example of relevant collaboration within the institution is Health, Environment, Research & Action (HERA) Collaborative, which operates under MCF to 'work in a collaborative way with communities (including children and young people), climate scientists (interdisciplinary), industry, and government actors', although further details or evidence of these partnerships and their meaningfulness were not readily available. Another example of relevant partnerships is the novel Healthcare Carbon Lab. This is a partnership between MDHS and Western Health that aims to measure hospital waste and catalyse sustainable change.	

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: Various community facing seminars and events were offered in 2024. Some examples include • Melbourne School of Population and Global Health (MSPGH) organised the free public lecture "Expert Panel on Climate and Health Vulnerability, Capacity and Adaptation Assessment". • The Climate CATCH lab is a subsidiary of the MSPGH, and hosted many events devoted to planetary health in 2024. These included a "fire-side chat" focusing on climate change, migration and health, and the 2024 Miegunyah Distinguished Fellowship Lecture: 'Heat and health: The latest science'. These community-facing lectures were free to attend, and offered in live and recorded viewing formats. • Additionally, at an institution level, in July 2024, the Department of Nursing hosted in collaboration with the Royal Children's Hospital and Peter MacCallum Cancer Centre a public seminar titled "Planetary Health: What it is and why it matters."	

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:	0
Score explanation: To the best of our knowledge, there are no known regular or relevant communications directed to MD students. There have been several emails from the medical school on a cohort wide level over the calendar year pertaining to climate change. However, these emails were sign-ups for research projects and volunteer programs in sustainability. As such, these irregular communications were not associated with educational coverage of these issues and provide limited relevant information.	

In addition, some students received clinical school specific emails pertaining to events addressing planetary health/sustainable healthcare. For example, students at St Vincent's clinical school received an email invitation to a St Vincent's staff-wide sustainability lecture and Western students received an invitation to a Sustainable Healthcare Research and Implementation Priority Setting Workshop (hosted by the climate CATCH lab). However, these were from the individual health services/clinical schools, not the institution or medical school, and were irregular.

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:
The institution and individual hospital sites offer opportunities for advancing understanding of climate change and its impacts on health.

Three such examples include:

- Environmental Sustainability in Quality Improvement for Healthcare Workshop (16/10/2024): 'This workshop is designed for clinical and non-clinical health professionals and staff interested in environmentally, socially, and financially sustainable healthcare.'
- Graduate Certificate in Climate Change and Health: 'The primary target market is health professionals who have an interest in climate change and health and who may be considering a career pathway in leadership of policy and practice change and sustainability within the health sector.'
- The Austin Health online education resource for Climate Change and Health: resources for Austin Health staff detailing climate change and public health, sustainability, and health outcomes

To the best of our knowledge, workforce education addressing planetary health in Dentistry is not offered at Royal Dental Hospital of Melbourne (RDHM) and Dental Health Services Victoria (DHSV).

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: We extensively searched online for each hospital via search engines and hospital websites. We mostly failed to find any patient resources related to environmental exposures, except for one blog on bush fire smoke from the Epworth and some resources on thunderstorm asthma, heat health, mosquitos and sun, water and fire safety via Bendigo Health, Goulburn Valley Health and Western Health. Additionally, one student in 2023-2024 reported the presence of brochures in the Wangaratta Hospital discussing environmental exposures such as from bushfire smoke. We are unable to confirm whether this is still available in 2024-25. It is of interest that these resources mainly came from hospitals associated with smaller, predominantly rural, Clinical Schools: these have a smaller number of students, and rural areas experience a high burden of climate health impacts. To the best of our knowledge, RDHM, Melbourne Oral health Training and Education Centre and Melbourne Dental Clinic do not have accessible educational materials for patients regarding environmental health exposures.	

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:	1
Score explanation: We extensively searched online for each hospital via search engines and hospital websites. The majority of hospitals had several online resources on climate-related health topics including thunderstorm asthma, Japanese encephalitis, bushfire smoke and heat stroke, as per 3.5, however, none of these resources made any explicit link between the incidence of the health condition and climate change.	

One affiliated teaching hospital, Bendigo, did provide educational resources that explicitly recognize the link between climate change and health conditions, including 2 translated PDFs. It must be noted, however, that this teaching hospital has amongst the smallest student populations (approx 5 full-time students in 2024) and that University of Melbourne's affiliation has ceased in 2025. Thus this criteria may be downgraded in future years. RDHM, Melbourne Oral health Training and Education Centre and Melbourne Dental Clinic do not have accessible educational materials about the health impacts of climate change.

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:
In 2025, The University of Melbourne continues to offer its flagship academic initiative for climate research, the Melbourne Climate Futures Australian Government Research Training Program Scholarship, bequeathing 100% fee remission and up to $135,000 in surplus funds to 3 students per annum who undertake either a Doctor of Philosophy or Master by Research focused on addressing the climate crisis. To the best of our knowledge, no medical student has yet been successfully enrolled in the program at the time of writing.

Moreover, the University continues to offer the Wattle Fellowship to roughly 30 students per annum who are interested in completing a sustainability and/or QI project whilst undertaking their usual studies, providing tailored academic, financial, and mentoring support to successful candidates in achieving their research goals. At the end of 2024, 3 medical students were welcomed as new Wattle Fellows, compared to only 1 medical student in 2023, representing a significant uptake of this program by the medical student body.

As a part of Dental Research Project A in the Doctor of Dental Surgery (DDS), some second-year DDS students received funding to conduct sustainability research in the dental field.

Finally, the University continues to offer substantial Impact Grants for students, which can be used to develop, enact, and promote sustainability and/or QI initiatives within the local community:

- SSAF Fee Grant: up to $20,000 per project
- Health Promotion Grant: up to $10,000 per project
- Peter McPhee Community Impact Grant: up to $5,000 per project

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:
In 2025, The University of Melbourne continues to offer competitive opportunities for medical students to become involved in planetary health and/or sustainable healthcare research, including the Melbourne Climate Futures Australian Government Research Training Program Scholarship and Wattle Fellowship (refer to Section 4.1.).

Moreover, newly established in late 2024, the University, through the Department of Surgery and the Climate CATCH Lab, now offers the Students in Sustainable Healthcare Program each year. This program enables medical students to work individually or in teams to devise a research project addressing issues in sustainable healthcare, under the mentorship of clinician supervisors. This program culminates in a formal showcase of the students' research to colleagues and staff within the Faculty of Medicine, Dentistry, and Health Sciences and affiliated hospital networks. In its inaugural year of operation, 16 medical students participated in this program.

In 2024/2025 at the Melbourne Dental School, second-year DDS students enrolled in the subject Dental Research Project A were given the opportunity to research related to planetary health. However, as participation was assigned randomly, not all students had equal access to conduct planetary health research. Instead, the remaining cohort had the opportunity to attend an oral presentation where they were introduced to the various sustainability projects undertaken within this subject. Currently, the Doctor of Dental Surgery program does not offer elective opportunities for students to participate in sustainability-focused research.

As part of the current Doctor of Medicine curriculum, all students must successfully complete a formal Research Project through either the Research Scholar or Clinical Scholar Discovery Pathways in MD4. Opportunities may be provided or pursued across various disciplines, including planetary health and/or sustainable healthcare research.

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:
The institution has made significant progress in promoting planetary health and sustainable healthcare through several initiatives and resources. The Climate CATCH Lab focuses on climate change and health research, engagement, and education, jointly operated by the School of Population and Global Health and Melbourne Medical School (Climate CATCH Lab). The Melbourne Climate Futures initiative addresses sustainable healthcare, aiming to reduce healthcare's environmental impact (Melbourne Climate Futures).
The Sustainable Healthcare Hub within the Melbourne Medical School's Department of Critical Care highlights leadership by experts who are actively driving research and real-world solutions in healthcare sustainability. These efforts make sustainable healthcare accessible to students and faculty, providing opportunities for mentorship, engagement, and advocacy. Additionally, the Students in Sustainable Healthcare symposium showcases student-led planetary health efforts (Students in Sustainable Healthcare).

There are no dentistry specific websites or activities that inform students on planetary health and sustainable healthcare at the institution.

We heavily encourage development of links between students and supervisors/mentors, especially for engaging in Planetary Health/ESH research projects. This may be in the form of a directory.

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:
There are opportunities for students to be engaged with planetary health, however, none of these are in the form of a registered, faculty supported student organisations dedicated to planetary health.

Most significantly, DEA Student group: Doctors for the Environment Australia student group at the University of Melbourne is an independent medical student club. This group does not have direct support from faculty, but can typically contact and communicate with faculty members if required for a particular event or project. Technically, the group is not currently registered with the institution due to administrative implications of affiliation with the National DEA Organisation, however, we judge that the DEA fulfils the equivalent role for this criteria. There is engagement with the faculty, but no formal support. Significantly, this group exclusively involves Medical Students.

Other student opportunities/groups with relevance that do not fulfil this criteria include:

- **Wattle Fellowship:** The Wattle Fellowship is the University of Melbourne's co-curricula program for students to foster leadership on global sustainability. They focus on multidisciplinary approaches, transformative leadership and practical skills development. This is a program, not a student group.
- **Student Groups and Clubs:** There are currently 10 student clubs at the University of Melbourne that focus on sustainability issues, ranging from environmental advocacy and climate action to sustainable food initiatives and community gardening. None of these are dedicated to planetary health.
- **UMMSS Sustainability Officer:** UMMSS (University of Melbourne Medical Students' Society) is the representative body of the medical students at University of Melbourne. UMMSS representatives meet with the medical school regularly and can advocate on students' behalf. While there is a sustainability officer on the UMMSS committee, the main operations of UMMSS are not focused on planetary health or sustainable healthcare, so they cannot fulfil this criteria.
- **Sustainability Action Group**: A new sustainability action group with faculty support is in the early stages of being established, although no visible progress was made in 2024-2025 period. It was originally envisioned to be a student-led group (including medicine, nursing, and allied health students) with faculty support, and with the aim of supporting and enhancing sustainability practices within the MDHS (Medicine, Dentistry and Health Sciences) school. Since this group has not yet been significantly established or commenced any action including meetings, it cannot fulfil the criteria at this stage. We nonetheless acknowledge the faculty's enthusiasm in supporting the establishment of this group.

4.5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
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:
To the best of our knowledge, at the medical or dental school level there is currently no student representation in decision-making councils. The potential for a student "Sustainability Squad" has been discussed over the last few years, but this group has not formally been established nor any visible actions towards this indicated. Additionally its specific structure (i.e. whether it involves student representation on a decision-making council) is unconfirmed.

Furthermore, at an institutional level, while there is evidence of student involvement in sustainability initiatives, there is no student representation at a decision-making level to influence sustainability practices at the university. For example there are opportunities for students to become involved in sustainability practices (e.g. students part of a club or society who want to make their activities and events more sustainable). Additionally, the University's sustainability plan mentions a sustainability advisory group (that includes student representation) to "guide implementation of the..sustainability plan" (p. 59) as well as sustainability surveys and consultation processes that involve students but this does not suggest that there is student representation at a decision-making level.

We are optimistic about the intentions of the medical school in creating an opportunity for student representation on decision making bodies in the future.

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.	0
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:

1. The university has a community garden that students help run and is a place where students can explore their environmental interests and skills.
2. The university runs public lectures on a range of topics. One example of a recent and relevant planetary health lecture is 'Sustainable diets and planetary health literacy'.
3. We are not aware of specific events with a focus on environmental justice and community collaboration.
4. In 2023 the Faculty of Arts hosted a public symposium about the climate emergency and involved multidisciplinary perspectives from academics, artists, activists and theatre makers however, to the best of our knowledge no such event, or similar, has occurred in 2024.
5. The Wattle Fellowship offers numerous such opportunities for its selected students to participate in. More generally, the university also has a Sustainability volunteer program as part of The Sustainability Team. Additionally, the university has run events such as the Thrift market which involved students volunteering with relevant local community groups and charities.
6. The Wilderness Medicine Students' Society offers a range of outdoor activities and experiences for students. There is no equivalent program in the dental school, however, Melbourne University Mountaineering Club offers a similar diverse selection of opportunities to the university more broadly.

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:
The University of Melbourne has two teams dedicated to sustainability. These are the Sustainability, Campus Management, and Sustainability Strategy, Corporate Finance Property and Sustainability. Both of these teams have multiple full-time staff members dedicated to campus sustainability and advocacy.

The Faculty of Medicine, Dentistry, and Health Sciences (MDHS) and the Melbourne Medical School (MMS - through the Department of Critical Care) have part-time honorary staff within the Sustainable Healthcare team who hold formal roles to advocate in this space. Specifically, they host the Sustainability and Planetary Health Action Network (SPHAN) which facilitates collaboration with MMS and affiliated hospitals on sustainable healthcare activities. A MDHS Sustainability Plan is currently under development which focuses on operations within the MDHS. However, to the best of our knowledge, there is not yet a specific designated University of Melbourne staff member overseeing sustainability at the medical teaching hospitals or at the Royal Dental Hospital of Melbourne.

There is also the Melbourne Climate Futures (MCF), a research/academia collective integrating multiple disciplines within the university for research collaboration and sustainability initiatives.

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: The Melbourne Medical School (MMS) falls under the umbrella of the University of Melbourne's plan, titled 'Sustainability Plan 2030' which details the university's commitment to achieving certified carbon neutrality by 2025 and climate positive status by 2030. It has clear performance indicators tracking progress towards these goals, including the Climate Active carbon neutral certification.	

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: The electricity utilised on-site at the University of Melbourne campus is 100% renewable. This is powered through on-site generation, from 11,000 solar panels across all campuses, and the remaining portion is purchased via power purchase agreements with Victorian wind farms. However, the energy mix that powers the MDHS buildings is unclear. For the MMS buildings/infrastructure, a report published by the University of Melbourne's Sustainable Campus Design Manager, Gerard Healy, in 2022, estimated that only approximately 64% of energy is sourced renewably. The Melbourne Dental School's teaching facilities reside on the premise of RDHM, part of Dental Health Services Victoria. The Annual Report 2023/24 published by Dental Health Services Victoria shows that 11.3% of the total energy usage is from renewable sources, however this will not be considered in this metric as it is part of the hospital rather than the institution's campus.	

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:	2

Score explanation:
The University of Melbourne's Design Standards require all new buildings and major refurbishments on campus to receive Green Star certification, with a minimum rating of 5 stars. The Green Building Council of Australia (GBCA) considers 5 stars to be 'Australian excellence'. The newly built medical building for the MMS will be required to meet this standard, and further be required to reach climate positive status as per the GBCA Green Star certification standards.

Additionally, the Western Edge Biosciences building, used for some first year medical student teaching, has a six-star Green Star Design and As Built rating. Similarly, 'The Spot' has a 5 Star Green rating.

The main medical building for the MMS is currently planned for demolition as part of the University of Melbourne's Sustainability Plan 2030. In accordance with this strategic plan, all old buildings are being retrofitted, and new buildings will be built with carbon emissions considered. There is limited information available on the retrofitting status of existing buildings on the University of Melbourne campus. The 'Retrofitting for sustainability' webpage showcases one example of retrofitting an existing building to improve efficiency and reduce emissions, however no other examples are provided.

The Melbourne Dental School's teaching facilities reside on the premise of RDHM, part of Dental Health Services Victoria, rather than on the institution's campus. The Annual Report 2023/24 published by Dental Health Services Victoria commented 'N/A' for the section 'Discuss how environmentally sustainable design (ESD) is incorporated into newly completed entity-owned buildings'.

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 of Melbourne strongly encourages environmentally friendly transport options. There are bike facilities across all campuses. The Bike Collective is a space run by student volunteers that offers free bike repairs and advice at Union House. There are also bike repair stations across all campuses that provide tools to complete minor repairs, while on campus including a pump, set of allen keys, screw drivers, wrenches, and tyre levers. They offer transport for students, particularly between campuses, and all campuses are accessible via public transport. All these options are accessible and frequently used by students.	

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 University of Melbourne's Parkville campus, where the Melbourne Medical School is located, has both an organics recycling program and a conventional recycling program. The organic waste bins are located at the Student Pavilion, the Melbourne Connect building, the Melbourne University Community Garden, and the System Garden. The organic waste from these bins is processed off-site by Veolia to produce compost and mulches. The Student Pavilion also contains back of house organic waste bins for food and beverage retailers. As per the retailer's lease agreements, they are required to separate organic waste. The	

organic waste from these bins is processed on-site to produce soil conditioner which is then taken off-site to be matured and mixed to make nutrient-rich soil.

Conventional recycling bins are located throughout the Parkville campus.

There are some specialist recycling bins available at the Parkville campus for e-waste and batteries. Soft plastics recycling is available at 5 laboratories and polystyrene recycling is currently being trialled for laboratories.

Front of house container deposit collections are currently being trialled at the Student Pavilion through Scouts Victoria's Container Deposit Scheme (CDS).

Waste audits are conducted of bins on campus to assess for contaminants.

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:
The University of Melbourne's Procurement Policy (MPF1087) does not contain any sustainability criteria for the procurement of food and beverages.

The Sustainable Events Guide does contain guidelines for sustainable food and beverage selections for organisers of on-campus events, including a resources guide with a preferred list of sustainable caterers. However, there is no requirement for events hosted by the Melbourne Medical School or its students to adhere to these guidelines.

On-campus food and beverage retailers are eligible to participate in Green Impact, a program which provides an online toolkit for making workspaces more sustainable. For example, the introduction of plastic-free food and beverage options on campus aims to reduce the university's contribution to plastic pollution - Reusable cups and bowls are available on campus at multiple food vendors. Notably, this practice is optional and students do not have to participate. However, this program is not mandatory, and there are currently no clauses in the retailer's lease agreements with the University of Melbourne which relate to food and beverage sustainability.

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: Procurement at the University of Melbourne, including the Melbourne Medical School, is governed by the Procurement Policy (MPF1087). This policy mandates that 'Procurement must be conducted in an ethical, sustainable and transparent manner…Procurement decisions must consider economic, social and environmental impacts…[and] Procurement activities should meet the highest standards of ethical and sustainable conduct throughout the supply chain'. However, there are no specific guidelines or metrics which elaborate on the sustainable conduct established by the policy, nor evidence of tangible efforts towards this. Further, 'Environmentally sustainable outputs' is one of the objectives established by the University of Melbourne's Social and Sustainable Procurement Framework. The outcomes sought by this objective are 'Project-specific requirements to use sustainable resources where applicable to manage recycled content, sustainable materials, waste management and energy consumption' and to 'Focus on local sourcing (within a 25-50Km radius)'. However, there are currently no specific mandates under the Procurement Policy which directly pursue these outcomes, nor evidence of tangible efforts towards this.	

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 of Melbourne has a Sustainable Events Guide for all events held on campus, which includes sustainable event checklists, a resources guide with a preferred list of sustainable caterers, and a set of standards to which single use item suppliers must adhere. It is strongly recommended to adhere to this guide, and sustainable events are able to register as case studies for the University's Sustainability Team for the opportunity to be recognised. There is no requirement for	

events hosted by the Melbourne Medical School, Doctor of Dental Surgery, Bachelor of Oral Health or its students to adhere to this guide.

A Sustainable Events Policy and a Sustainable Events Accreditation are currently being developed by the Campus Management Sustainability Team.

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: Laboratories at the University of Melbourne are eligible to participate in Green Impact, a program which provides an online toolkit for making workspaces more sustainable. There are actions within the toolkit which are specifically targeted at laboratories. A project proposal to incentivise laboratories to participate in the Green Impact program is currently being finalised, which would subsidise the My Green Lab Certification for laboratories who join Green Impact. A laboratory sustainability website with guidelines and resources for reducing the environmental impact of laboratories at the University of Melbourne is currently in development.	

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 of Melbourne's Sustainability Plan commits to excluding investments related to fossil fuel from its investment portfolio by 2030. Further, it commits to including the investment portfolio in the University's climate positive commitment (to be climate positive by 2030), which would address carbon emissions across the whole investment portfolio. As per the most recent reporting, the University of Melbourne continues to invest in fossil fuels.	

Section Total (21 out of 32)	**65.63%**

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(40/72) x 100 = 55.56%	C+
Interdisciplinary Research (17.5%)	(12/17) x 100 = 70.59%	B
Community Outreach and Advocacy (17.5%)	(10/14) x 100 = 71.43%	B
Support for Student-led Planetary Health Initiatives (17.5%)	(11/15) x 100= 73.33%	B
Campus Sustainability (17.5%)	(21/32) x 100 = 65.63%	B
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 65.84%**	**B**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which The University of Melbourne (Medicine) has participated in the Planetary Health Report Card initiative.