



Planetary Health Report Card (Medicine)

Monash University



2023-2024 Contributing Team:

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Summary of Findings

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| Overall | C |
| <u>Curriculum</u> | C |
| <ul style="list-style-type: none"> • Monash University does include planetary health in the curriculum, and it is integrated longitudinally across all years of medical school; however it is considered minimal. Each year, students receive just one or two lectures on planetary health as part of core teaching. • Recommendations: Monash Medical School should aim to increase the depth of content of planetary health within the medical curriculum. One method may be integrating planetary health directly into education about ‘core conditions’, in order to highlight clinically relevant links. | |
| <u>Interdisciplinary Research</u> | C+ |
| <ul style="list-style-type: none"> • The Planetary Health Division within the School of Public Health and Preventive Medicine, conducts planetary health and healthcare sustainability research. This unit has a website where they provide updates on current research, as well as conferences and workshops. • Recommendations: The School of Medicine should provide clarity around the exact work of its members involved in planetary health research; this would facilitate students, staff, and community members to get more involved in this work. Monash Medicine should also seek to join with external organisations promoting planetary health. | |
| <u>Community Outreach and Advocacy</u> | F |
| <ul style="list-style-type: none"> • Monash Medical School has minimal community outreach regarding planetary health, and affiliated hospitals offer few resources to patients regarding environmental health exposures or the impacts of climate change on health. The University does offer ‘Sustainable Healthcare in Practice’, a short course delivered by the Monash Sustainable Development Institute. • Recommendations: The Medical School should improve communication to students regarding related topics and initiatives within the community, and should cooperate with relative organisations such as Climate Council or Planet Ark. | |
| <u>Support for Student-Led Initiatives</u> | B- |
| <ul style="list-style-type: none"> • The Monash Medical School has student support groups dedicated to planetary health, namely Doctors For the Environment Australia and Australian Medical Students Association Code Green, however both are funded externally and lack faculty and student union support. • Recommendations: Student associations for planetary health within the medical school should receive faculty and student union support. This would promote increased opportunities for students to engage in planetary health related activities such as research, education and advocacy. | |
| <u>Campus Sustainability</u> | C |
| <ul style="list-style-type: none"> • The University has sustainability initiatives, including a Sustainable Development Institute and a net zero emissions target by 2030, but the Medical School has lagged behind. Medical teaching buildings currently use non-renewable energy sources and lack consistent recycling and composting programs. • Recommendations: The Monash Medical School should introduce sustainability criteria that must be met in order for events to be approved, and should provide better waste management infrastructure. One suggestion is to collaborate with social enterprises, such as <i>Terracycle</i>, to repurpose challenging items such as soft plastics, coffee pods, and textiles. | |

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “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 medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (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. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions providers are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and 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.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

Other considerations:

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

Added to our resources in 2022, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

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

Curriculum: General

| 1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year? | |
|--|---|
| 3 | Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. |
| 2 | Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. |
| 1 | The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. |
| 0 | No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. |
| <p><i>The Monash Medical School does not offer specific electives relating to Education for Sustainable Healthcare or Planetary Health. However, there are short courses provided by the University which are accessible to Medical students and function in a similar way to elective courses. These include the "Sustainable Healthcare in Practice" short course offered by the Monash Sustainable Development Institute, which comes under the Professional Development and Continuing Education department. There is also a "Global Health Care Delivery" short course run by Dr Maithri Goonetilake, which is also currently a unit in the Masters of Public Health degree, that covers the health impacts of climate change. However, it should be noted these courses are not free or included in the Medical School tuition fee, and therefore require medical students to pay out of pocket; this is a significant drawback.</i></p> | |

Curriculum: Health Effects of Climate Change

| 1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change? | |
|--|--|
| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |

In year 1A, there is a singular planetary health lecture within the subject Health Knowledge and Society (HKS) (primary lecturer Dr Maithri Goonetilleke). This subject also includes a Social Determinants of Health tutorial.

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

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

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

All of these topics are examinable.

1.3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?

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

In year 1A, there is a singular planetary health lecture within the subject Health Knowledge and Society (HKS) (primary lecturer Dr Maithri Goonetilleke). This subject also includes a Social Determinants of Health tutorial.

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

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

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

All of these topics are examinable.

1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?

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

In year 1, the subject Health Knowledge and Society includes a discussion of mosquito-borne diseases, including an explicit mention of climate change as a driver of mosquito-borne diseases. One of the lecture slides mentioned that “Relative increases in ambient temperature, humidity and altered rainfall patterns promote mosquito breeding and increase mosquito burden.”

As a piece of further reading for the interested, a [New York Times article](#) on dengue in a warming world is included in the module.

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

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

In year 4C, the subject Occupational and Environmental Medicine (OEM) includes a lecture on Occupational and Environmental Respiratory Conditions which discusses air pollution and how it affects health.

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

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

The cardiovascular health effects of climate change are briefly covered in the curriculum, but to a lesser extent than respiratory impacts. In year 2, a special lecture delivered by two representatives of Doctors for the Environment Australia (DEA) during the Rural Placement week in semester 2 discusses the impacts of climate change on health. It includes one slide on the correlation between extreme heat

and myocardial infarction and an explanation of the pathophysiology. However, this is part of a series of webinars about preventative health specifically delivered during the semester 2 Rural Placement program, with only half of the student cohort in attendance.

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

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

This is briefly addressed in the year 2 Health Promotion (HP) course. In the year 2 HP assignment, students are asked to explain how climate change can impact communities; mental health is included in this conversation. The learning objective that this assignment pertains to is “Discuss the specific direct and indirect impacts of climate change on the population”.

1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

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

The relationships between health, individual patient food and water security, ecosystem health, and climate change are briefly discussed in the singular Health Knowledge and Society (HKS) lecture on planetary health and in the Health Promotion (HP) subject.

1.9. Does your 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?

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

The outsized impact of climate change on marginalised populations is briefly covered in the singular Health Knowledge and Society (HKS) lecture on planetary health, and in the Health Promotion (HP)

subject curriculum. One learning objective from the HP curriculum is “explain the relationship between climate change and health inequity”.

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

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

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

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

There is a learning objective specifically related to the topic of inequality linked to climate change in the year 2 Health Promotion course. The learning objective in question is “explain the relationship between climate change and health inequity”.

Learning objective 2 and 3 of Health Knowledge and Society module 3 reference how determinants of health, including climate change, can lead to health inequality. Learning objectives 2 and 3 are “outline the wide range of factors interacting to influence health status” and “describe the concepts of health inequality and inequity” respectively.

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

1.11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?

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

The year 4C curriculum includes an eight-week program on Obstetrics and Gynaecology. Teaching across Monash University Medical School makes no specific mention of industry-related environmental toxins (e.g. air pollutants, pesticides).

1.12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?

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

The core curriculum does not address any important human-caused environmental threats that are relevant to the university's surrounding community. However, in the postgraduate stream (year A), there is an informal discussion about the health-related impacts of the Hazelwood mines (which are in close proximity to the Churchill campus), including increased rates of cancer and respiratory conditions.

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?

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| 3 | Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education |
| 2 | Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum. |
| 1 | Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework. |
| 0 | This topic was not covered. |

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

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| 3 | This topic was explored in depth by the core curriculum. |
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| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <i>Monash University Medical School does not teach students anything regarding anthropogenic environmental toxins on marginalised populations.</i> | |

Curriculum: Sustainability

| 1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet? | |
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| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <i>Across the medical curriculum, there are several references to the benefits of a plant-based diet in reducing cardiovascular risk factors. However, the focus is always on health benefits with no mention of co-environmental benefits.</i> | |
| <i>In year 1 Health Enhancement Program (HEP) there is a nutrition lecture that concludes there is “no one answer as to which diet is best” but that guidelines favour a “predominantly plant-based” diet. It states that low intake of vegetables and fruits, and high intake of processed meats, all correlate to adverse cardiovascular health. It also identifies processed meats as a Group 1 carcinogen and favoured consumption of cruciferous vegetables and soy for cancer prevention.</i> | |
| <i>In year 4C, under the General Practice (GP) rotation, students are taught that patients with a plant-based diet are at risk of nutritional deficiencies (e.g. iron, vitamin B12, folate), and that it is important to provide supplementation. However, there is no mention of the environmental benefits of a plant-based diet.</i> | |

| 1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems? | |
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| 3 | This topic was explored in depth by the core curriculum |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <i>Year 4 Health Economics focuses on reducing medical waste for hospital resourcing reasons rather than carbon footprint reduction.</i> | |

| 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) | |
|---|--|
| 2 | The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment |
| 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. |
| 1 | The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. |
| 1 | Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated |
| 1 | The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions |
| 1 | The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. |
| 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) |
| <p><i>The Eastern Health Clinical School, within the Faculty of Medicine, Nursing and Health Sciences, delivers a lecture to 3rd year students called "No Unnecessary Tests". This lecture is also delivered to the entire year 5 cohort during one of the back-to-base curriculum learning days. This lecture covers the health and environmental co-benefits of avoiding over-investigation, discussing the carbon footprint associated with pathology and imaging investigations. The lecture encourages students to consider which tests are necessary before ordering them and provided strategies for evaluating this. These include checking consensus guidelines, considering whether the test is likely to impact management, evaluating the risks of performing the test and considering the reliability and pre-test probability of the investigation. Common tests discussed include Urine Microbiology, Culture, Sensitivities (MCS) and pulmonary embolism investigations.</i></p> <p><i>The Year 4 GP rotation has a heavy emphasis on avoiding overprescription and intentionally ordering investigative tests, which is discussed in the context of resource waste reduction. There are offhanded references to environmental impacts of medical waste but not within the formal curriculum.</i></p> | |

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? | |
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| 2 | Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. |

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| 1 | Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. |
| 0 | No, there are not strategies introduced for having conversations with patients about climate change |
| <i>Monash University Medical School does not teach students anything regarding strategies to have conversations with patients about the health effects of climate change.</i> | |

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| 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? | |
| 2 | Yes, the core curriculum includes strategies for taking an environmental history. |
| 1 | Only elective coursework includes strategies for taking an environmental history. |
| 0 | No, the curriculum does not include strategies for taking an environmental history. |
| <i>In Occupational and Environmental Medicine there are several role plays which focus on taking a history from patients with known exposures.</i> | |
| <i>In the Year 4 GP curriculum, there is a tutorial involving a simulated patient roleplay with a patient presenting with an occupational exposure to organophosphates. The tutorial was focused on exposure history taking without specific mention of climate change related exposures.</i> | |

Curriculum: Administrative Support for Planetary Health

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| 1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education? | |
| 4 | Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education. |
| 2 | Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education. |
| 0 | No, there are no improvements to planetary health education in progress. |
| <i>Current medical students are not aware of any process of implementing or improving Education for Sustainable Healthcare (ESH) or planetary health education.</i> | |

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| 1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum? | |
| 6 | Planetary health/ESH topics are well integrated into the core medical school curriculum. |
| 4 | Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. |

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| 2 | Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . |
| 0 | There is minimal/no education for sustainable healthcare. |
| <p><i>In Year 1, there is a singular planetary health lecture for the subject of Health Knowledge and Society (HKS) (primary lecturer Dr Maithri Goonetilleke). HKS also includes a tutorial on Determinants of Health (SDGs).</i></p> <p><i>In Year 2, the subject of Health Promotion discusses the concept of climate change, its impacts on people and global health, and how it is being tackled on a local, national, and global scale. It further discusses how the medical profession can respond to climate change.</i></p> <p><i>In Year 3, the Occupational and Environmental Medicine (OEM) topic rehashes similar ideas as Health Promotion in Year 2, but with a renewed focus on how climate change can drive disruptions to key population groups such as agriculture (with the shifts in growing seasons due to warming weather) and urban dwellers (air pollution and urban heat islands).</i></p> <p><i>In the postgraduate topic of Health and Society, Rural Health Access touches on climate-related impacts on agriculture, and mental health impacts on farmers. Within this the Sustainability and Health module, panel discussion, and climate disaster response activity also touch on how the climate impacts health.</i></p> | |

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

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| Section Total (36 out of 72) | 50.00% |
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^Monash University has both undergraduate and postgraduate streams in the medical degree, which combine in the clinical years. The undergraduate years are referred to numerically as years 1-5 (5 years total), and the postgraduate years are referred to alphabetically as years A-D (4 years total). Undergraduate years 1 and 2 (preclinical) are combined into one postgraduate year, 'year A' (preclinical). From undergraduate year 3 and postgraduate year B, the streams are combined, so these years are often referred to as Year 3B, Year 4C, and Year 5D.

Interdisciplinary Research

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

| 2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ? | |
|---|---|
| 3 | Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability. |
| 2 | Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus. |
| 1 | There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school. |
| 0 | No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time. |
| <p><i>Monash University has a School of Public Health and Preventive Medicine (SPHPM), a part of the School of Medicine, Nursing, and Health Sciences. There are a few doctors amongst the SPHPM who have current or past climate-related research interests, some of whom are part of the Medicine. SPHPM has a Planetary Health Division, which addresses the health of humanity in the context of dynamic social and environmental systems, as well as a Health and Climate Initiative which seeks to investigate the impacts of climate change on health and vice versa, but none of the doctors/health professionals in it are involved in the Monash University School of Medicine faculty.</i></p> | |

| 2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ? | |
|---|--|
| 3 | There is at least one dedicated department or institute for interdisciplinary planetary health research. |
| 2 | There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years. |
| 1 | There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research. |
| 0 | There is no dedicated department or institute. |
| <p><i>SPHPM Climate and Health Initiative (as above in 2.1) is made up of infectious disease epidemiologists, environmental health researchers, etc. To quote them:</i></p> | |

“By combining insights from many disciplines, planetary health promotes an ‘eco-social’ understanding of health and emphasises the importance of diverse perspectives in creating solutions to problems affecting global public health.”

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 medical school?

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

We are not aware of any established processes within the medical school for community members to advise or make decisions on the research agenda.

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

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

The institution has a [website](#) detailing the steps being undertaken by the university in order to contribute to environmental sustainability. While it is comprehensive in explaining how the campus is striving for sustainability, it does not go past this scope. However, there is a separate [website](#) in regards to the research done by the university and leaders involved within climate change at the university.

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

| | |
|---|--|
| 4 | Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year. |
|---|--|

| | |
|---|--|
| 3 | Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year. |
| 2 | Yes, the institution has hosted a conference on topics related to planetary health in the past three years. |
| 1 | The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event. |
| 0 | No, the institution has not hosted a conference on topics related to planetary health in the past three years. |
| <p><i>Monash University organised the “Sustainable development for thriving communities” and Centre for Development Economics and Sustainability (CDES) Sustainable development conferences in 2023 which discussed sustainable business and development practices. In this conference, there were some planetary health presentations and discussions, for example, one presentation was titled “Rainfall's Impact on Living Conditions, Health, and Wellbeing in Urban Informal Settlements”. In addition to this, the university has also taken part in conferences held by other organisations regarding climate change and have held workshops which have had their findings presented at bigger symposiums.</i></p> | |

| | |
|--|--|
| 2.6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organisation? | |
| 1 | Yes, the medical school is a member of a national or international planetary health or ESH organisation |
| 0 | No, the medical school is not a member of such an organisation |
| <p><i>Monash Medical school is not a member of a national or international planetary health or Environment, Safety, and Health (ESH) organisation.</i></p> | |

| | |
|-------------------------------------|---------------|
| Section Total (10 out of 17) | 58.82% |
|-------------------------------------|---------------|

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Community Outreach and Advocacy

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

| 3.1. Does your medical school partner with community organisations to promote planetary and environmental health? | |
|---|--|
| 3 | Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health. |
| 2 | Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health. |
| 1 | The institution partners with community organisations, but the medical school is not part of that partnership. |
| 0 | No, there is no such meaningful community partnership. |
| <i>Monash University Medical School has not partnered with any community organisations to promote planetary and environmental health.</i> | |

| 3.2. Does your medical school offer community-facing courses or events regarding planetary health? | |
|---|---|
| 3 | The medical school offers community-facing courses or events at least once every year. |
| 2 | The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. |
| 1 | The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events. |
| 0 | The institution/medical school have not offered such community-facing courses or events. |
| <i>Monash University and the medical School have not offered community-facing courses or events regarding planetary health that are targeted towards the community.</i> | |

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

| | |
|---|---|
| 2 | Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. |
| 1 | Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates. |
| 0 | Students do not receive communications about planetary health or sustainable healthcare. |
| <i>Monash University Medical School does not provide any communications related to planetary health and/or sustainable healthcare to university students.</i> | |

| | |
|--|---|
| 3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career? | |
| 2 | Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. |
| 1 | Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers |
| 0 | There are no such accessible courses for post-graduate providers |
| <i>Sustainable Healthcare in Practice is a short course offered by Monash University and is “recommended for existing health professionals, health educators, aspiring graduate students...”. It aims to educate the “knowledge and skills to create an inclusive, equitable, restorative and resilient health system.”</i> | |
| <i>The Environment and Sustainability Expert Master Degree is another course offered which teaches an “interdisciplinary foundation that allows you to analyse the interdependence of nature, society and the economy.” It has five main specialisations that students can learn including environment and governance, corporate environmental and sustainability management, environmental security, international development and environment, and leadership for sustainable development.</i> | |

| | |
|--|---|
| 3.5. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures? | |
| 2 | Yes, the medical school or all affiliated hospitals have accessible educational materials for patients. |
| 1 | Some affiliated hospitals have accessible educational materials for patients. |
| 0 | No affiliated medical centres have accessible educational materials for patients. |
| <i>Monash Medical Centre, which is Monash University’s main affiliated teaching hospital, provides resources for patients specifically on its website, however when trying to find resources on environmental health exposures, no records were found.</i> | |

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

| | |
|---|---|
| 2 | Yes, the medical school or all affiliated hospitals have accessible educational materials for patients. |
| 1 | Some affiliated hospitals have accessible educational materials for patients. |
| 0 | No affiliated hospitals have accessible educational materials for patients. |
| <i>None of the affiliated hospitals provide accessible educational materials for patients regarding the health impacts of climate change.</i> | |

Section Total (2 out of 14)

14.29%

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Support for Student-Led Planetary Health Initiatives

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

| 4.1. Does your <u>medical school</u> or your <u>institution</u> offer support for medical students interested in enacting a sustainability initiative/QI project? | |
|---|--|
| 2 | Yes, the medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. |
| 1 | The medical school or 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. |
| 0 | No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. |

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

| 4.2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare? | |
|--|---|
| 2 | The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research. |
| 1 | There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time. |
| 0 | There are no opportunities for students to engage in planetary health/sustainable healthcare research. |

Monash University has the [Monash Sustainable Development Institute](#) which undergoes research to help achieve the United Nations “Sustainable Development Goals”, which includes climate action. Any students of Monash University, including medical students are welcome to reach out to the researchers themselves to join or volunteer.

| 4.3. Does the <u>medical school</u> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors | |
|--|--|
|--|--|

| within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors. | |
|---|--|
| 2 | The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. |
| 1 | There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. |
| 0 | There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. |
| <p><i>Monash University Faculty of Medicine, Nursing and Health sciences have a ‘Health and Climate’ section in their research website with information regarding recent projects and updates, in addition to participating academics’ contact information.</i></p> | |

| 4.4. Does your medical school have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors? | |
|---|---|
| 2 | Yes, there is a student organisation with faculty support at my medical school dedicated to planetary health or sustainability in healthcare. |
| 1 | Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support . |
| 0 | No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare. |
| <p><i>Monash University students have a local, student-run branch of the national organisation, Doctors for the Environment Australia (DEA). Although the DEA provides support and funding to the student organisation, Monash University does not.</i></p> <p><i>AMSA (Australian Medical Students’ Association) has AMSA Code Green, which is a subcommittee that focuses on planetary health. As with DEA, the Monash members of this student run organisation do not receive faculty support.</i></p> | |

| 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? | |
|---|--|
| 1 | Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee. |
| 0 | No, there is no such student representative. |
| <p><i>Monash University does not have a representative in a decision-making council to advocate for curriculum reform and/or sustainability best practice.</i></p> | |

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)

| | |
|---|---|
| 1 | Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects. |
| 1 | Panels, speaker series, or similar events related to planetary health that have students as an intended audience. |
| 1 | Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts. |
| 1 | Cultural arts events, installations or performances related to planetary health that have students as an intended audience. |
| 1 | Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts. |
| 1 | Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students) |

In the past year, Monash University has run several co-curricular planetary health programs and initiatives, including:

1. *An Indigenous garden, which cultivates various native plants of cultural and medicinal significance. Additionally, there are various other community gardens across campus, which allow for students to grow vegetables and herbs. The Monash Student Society, as a project to tackle growing food insecurity within the student population, runs a fresh food market, which allows students access to fresh fruit and vegetables. There is a non-for-profit vegan and vegetarian restaurant on campus, run by student volunteers, that encourages students to consider sustainability, particularly with a focus on diet.*
2. *Student groups, such as 'Precious Plastics' build community, and encourage students on campus to consider and combat the impacts of, for example, single use plastics, and work towards creating solutions within the Institution.*
3. *At Monash University, many panels and discussions are held throughout the year. These lecture series include talks on topics of Climate Justice, Health, Indigenous Justice and Human Rights. These are free for students to attend, regardless of faculty, however do not specifically have a health focus.*
4. *At Monash University there are various outdoor clubs that are available for students to partake in. These clubs organise various different outdoors activities such as hiking and snowsport trips, which students can elect to attend.*

Section Total (9 out of 15)

60.00%

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Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the medical school and/or institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.

| 5.1. Does your medical school and/or institution have an Office of Sustainability? | |
|--|--|
| 3 | Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school. |
| 2 | There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability. |
| 1 | There are no salaried sustainability staff , but there is a sustainability task force or committee |
| 0 | There are no staff members or task force responsible for overseeing campus sustainability |
| <p><i>Monash University has a sustainability-focused institute known as the Monash Sustainable Development Institute involving researchers, students, academics and other professionals. This Institute involves full-time staff with a centralised leadership team. However, this exists externally from the Medical School with no formal Medical School representation.</i></p> | |

| 5.2. How ambitious is your institution/medical school plan to reduce its own carbon footprint? | |
|---|--|
| 5 | The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030 |
| 3 | The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040 |
| 1 | The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate |
| 0 | The institution/medical school does not meet any of the requirements listed above |
| <p><i>Monash University has committed to achieving net zero emissions by 2030. Their detailed strategy outlines seven key pillars including energy efficiency measures, campus electrifications, high-performing all-electric buildings, deployment of renewables, intelligent energy networks, net zero emission transport and residual emissions offsetting. This plan was formally approved in 2017.</i></p> | |

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

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

Looking at the [Monash University 2023 goals](#), all new buildings have renewable sources of energy. However, most medical school buildings are not new. It is difficult to find the information to quantify the percentage of infrastructure which utilises renewable energy. Currently there is the recently built Yarrowonga building which is part of the Faculty of Medicine, Nursing and Health Sciences, which uses solar power.

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

| | |
|---|---|
| 3 | Yes, sustainable building practices are utilised for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable. |
| 2 | Sustainable building practices are utilised for new buildings on the medical school campus, but most old buildings have not been retrofitted . |
| 1 | Sustainable building practices are inadequately or incompletely implemented for new buildings. |
| 0 | Sustainability is not considered in the construction of new buildings. |

Monash University has 2030 sustainability goals, found [here](#), according to which by 2030:

- *All new buildings are all electric, with rooftop solar.*
- *All new buildings designed to Passive House principles to achieve low energy demands and high occupant comfort.*
- *Existing campus buildings are electrified.*

In terms of Monash University Medical School, there are some newer buildings with a published sustainability rating system, but most of the older buildings will have to be renovated alongside the Monash University 2030 goals.

The recently opened Yarrowonga building, which is part of the Faculty of Medicine, Nursing and Health Sciences, incorporates solar power, water harvesting and reuse, and recycled materials. All excess energy the building produces is used to supply power to neighbouring sites, including the Japanese Centre.

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

| | |
|---|---|
| 2 | Yes, the medical school or 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. |
| 1 | The medical school or institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised. |
| 0 | The medical school or institution has not implemented strategies to encourage and provide environmentally-friendly transportation options. |

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

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

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

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

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

| | |
|---|---|
| 2 | Yes, the medical school has both compost and recycling programs accessible to students and faculty. |
| 1 | The medical school has either recycling or compost programs accessible to students and faculty, but not both. |
| 0 | There is no compost or recycling program at the medical school. |

Conventional recycling programs are present at the Clinical Skills Village on the Monash University Campus where recycling bins sit alongside waste bins in most classrooms.

At clinical sites (including affiliated hospitals), which provide student common rooms and learning spaces on site, the availability of compost and recycling programs is dependent on the hospital service. For example, at Monash Health, recycling is present at centres with a [2022-2023 sustainability plan](#) including objectives regarding auditing recycling at all major sites and increasing recyclability of clinical waste. However, there is no current robust composting goal with the timeline indicating a Q1 2024-2025 implementation of their goal to divert 25% of organic waste to composting.

Similarly, at Eastern Health recycling bins are present in the common room and tutorial rooms. The Annual Report has a sustainability section indicating the percentage of waste which goes to landfill, recycling etc. with a recycling rate of 21% for 2022-2023. While the infrastructure is available, this indicates a long way to go in achieving widespread adoption of recycling programs. No mention of composting is made in the report and compost bins are not present in the student common room or staff rooms of various wards.

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

| | |
|---|---|
| 3 | Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability. |
| 2 | There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is engaged in efforts to increase food and beverage sustainability. |
| 1 | There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is not engaged in efforts to increase food and beverage sustainability. |
| 0 | There are no sustainability guidelines for food and beverages. |

Monash University has published [guidelines](#) for sustainable eating/drinking and catering. However, it is unclear whether the Monash University Medical School follows these guidelines during events. There has been mixed feedback from students regarding the sustainability of events and therefore, it is likely that these sustainable guidelines are not strongly adhered to.

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

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

Monash University has published [guidelines](#) for sustainable eating/drinking and catering. However, it is unclear whether the Monash University Medical School follows these guidelines during events. There has been mixed feedback from students regarding the sustainability of events and therefore, it is likely that these sustainable guidelines are not strongly adhered to.

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

| | |
|---|---|
| 2 | Every event hosted at the medical school must abide by sustainability criteria. |
| 1 | The medical school strongly recommends or incentivizes sustainability measures, but they are not required . |
| 0 | There are no sustainability guidelines for medical school events. |

Monash University does have [sustainability guidelines](#) for events, but these are not strongly recommended, advertised or incentivised by the University and events organised by the Monash University Medical School are not always designed to prioritise sustainability.

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

| | |
|---|---|
| 2 | Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable. |
| 1 | There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives. |
| 0 | There are no efforts at the medical school to make lab spaces more sustainable. |

The Monash University Medical School does not currently have any programs or initiatives that aim to make lab spaces more sustainable. Although a lab induction program exists for all preclinical students, environmental sustainability is not referenced specifically during these induction modules.

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

| | |
|---|--|
| 4 | The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. |
| 3 | The institution is entirely divested from fossil fuels. |
| 2 | The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. |
| 1 | The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment. |
| 0 | Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. |

As stated in its most recent [annual report \(2022\)](#), Monash University has 100% divested from coal. In this report, the University stated its commitment to increasingly focus its investments in companies with a positive environmental impact and reduced carbon footprint. However, Monash University has not specifically stated that it has divested or is aiming to divest 100% from other non-renewable energy sources (e.g. gas).

| | |
|------------------------------|--------|
| Section Total (16 out of 32) | 50.00% |
|------------------------------|--------|

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Grading

Section Overview

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

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

Planetary Health Grades for the Monash University School of Medicine

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

| Section | Raw Score % | Letter Grade |
|---|--|--------------|
| Planetary Health Curriculum (30%) | $(36/72) \times 100 = 50.00\%$ | C |
| Interdisciplinary Research (17.5%) | $(10/17) \times 100 = 58.82\%$ | C+ |
| Community Outreach and Advocacy (17.5%) | $(2/14) \times 100 = 14.29\%$ | F |
| Support for Student-led Planetary Health Initiatives (17.5%) | $(9/15) \times 100 = 60.00\%$ | B- |
| Campus Sustainability (17.5%) | $(16/32) \times 100 = 50.00\%$ | C |
| Institutional Grade | $(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 47.04\%$ | C |