



Planetary Health Report Card (Dentistry):

The University of Melbourne



THE UNIVERSITY OF
MELBOURNE

2024-2025 Contributing Team:

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Land acknowledgment: We respectfully recognise the Traditional Custodians of the land we govern, the Wurundjeri Woi-wurrung and Bunurong/Boon Wurrung peoples of the Kulin Nation. We pay our respects to their Elders, both past and present.

Summary of Findings

| | |
|---|---|
| Overall Grade | B |
| Curriculum | B |
| <ul style="list-style-type: none"> The Melbourne Dental School adheres to a philosophy centred on prevention, integrated oral care and minimal intervention - an approach that aligns well with efforts to reduce environmental impact. In an effort to meet the updated ADC professional competencies, the revised 2024 curriculum gives planetary health a greater emphasis, particularly in the first-year curriculum, compared to previous years. While this topic is covered extensively in the first year subject <i>Professional Practice 1</i>, it remains an isolated component rather than a recurring focus integrated throughout the degree. <p>Recommendations: We recommend a continued comprehensive integration of sustainability throughout the curriculum, extending beyond the five-week course dedicated to it in the first year of the DDS degree. The addition of sustainability into the DDS2 and DDS3 curricula should be rolled out over the next few years as per the redesigned DDS curriculum. Ideally, sustainability should serve as a fundamental framework across various subjects, with clearer connections to the Melbourne Dental School's core philosophy of prevention. We also recommend the establishment of a MDS planetary health curriculum working group, which would foster better collaboration between staff and students, and facilitate systematic tracking and assessment of planetary health curriculum developments - this would be a great opportunity for students who are interested in sustainability to actively participate in improving the level of environmental education that both they themselves, and their peers receive throughout their time at MDS. Additionally, a specific staff member from the MDS should be assigned to implement findings and suggestions from the PHRC into the curriculum going forward after consultation with relevant learning and teaching staff.</p> | |
| Interdisciplinary Research | B |
| <ul style="list-style-type: none"> 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. <p>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. Furthermore, 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, especially interested students, as well as improved visibility for these important projects and events being undertaken.</p> | |
| Community Outreach and Advocacy | B |
| <ul style="list-style-type: none"> This year, the institution demonstrated ongoing and meaningful collaboration with the Climate CATCH (Collaborative Actions for Transformative Change in Health and Healthcare) Lab, and Healthcare Carbon Lab, as well as governmental and community partners such as Doctors for the Environment Australia (DEA) and the Climate and Health Alliance (CAHA). The Institution also provided in-person or online courses relating to planetary health and sustainable healthcare that were public facing, however none of | |

these were offered by the Melbourne Medical School (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.
- While the MDS does partake in student outreach (ie: [Smile Squad](#)) focused on preventative oral health education, it does not explicitly link its impact on environmental sustainability.

Recommendations: We encourage a stronger community and student communication about planetary health and sustainable healthcare, greater accessibility to educational materials for patients about environmental health exposures and the health impacts of climate change for both MMS and MDS. What resources that were present on this topic were predominantly from rural hospital affiliates that service smaller populations. Making resources such as [Bendigo Hospital's Climate Change and Health Pamphlet](#) more readily available to the community would aid advocacy greatly. The MDS student outreach focused on preventative oral health education, needs to be redefined to explicitly link its impact not only to improved patient outcomes but also to environmental sustainability. The MDS can also consider engaging more with professional societies and associations such as the ADA with established advocacy activities in sustainability.

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.
- In terms of co-curricular activities, there are institution lead projects and opportunities but a lack of community lead and culture/art related events.
- There has been significant improvements in Support for Student-Led Initiatives since the 2023-2024 medicine report card, though 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: The MDS may consider increasing its involvement and endorsement of planetary health initiatives, such as Climate Catch Lab, taking MMS as an example. 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 as well as in the DDS. 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 and assist the local sustainability movement. This could include linking with local councils or independent groups such as [Friends of Royal Park](#).

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.
- While the UoM has shown initiative in constructing high performing, sustainable new buildings, 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 improved transparency on the retrofitting status of the UoM existing buildings, including the MDHS buildings. Efforts to retrofit these buildings must include energy efficiency measures along with electrification to reduce the UoM's campus emissions.

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 dental 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 dental training. It is imperative that we hold our institutions accountable for educating dental 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, and 4) community outreach centred on environmental health impacts 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 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.
- **Sustainable Oral Healthcare:** As adopted at the FDI World Dental Federation, in its Sustainability in Dentistry Statement (2017), sustainable oral healthcare is the provision of equitable, ethical, high-quality, inclusive and safe care with appropriate, effective and efficient use of resources. Through this, the healthcare opportunities of current and future generations are respected and protected by actively minimising negative environmental impacts. (*Martin, N., Mulligan, S., Shellard, I.J. and Hatton, P.V., 2022. Consensus on Environmentally Sustainable Oral Healthcare: A Joint Stakeholder Statement. Pp. 7–10. York: White Rose University Press. DOI: <https://doi.org/10.22599/OralHealth.c>. CC BY 4.0*)
- **Environmental Sustainability in Dentistry (ESD).** Learning outcomes for Environmental Sustainability in Dentistry (ESD) have been proposed by Joury et al. (2021) based on a review of the literature and adaptation of current learning outcomes in medical education:
 1. Describe concepts and definitions of climate change, carbon footprint and sustainability
 2. Discuss the importance of environmental sustainability for the health of patients
 3. Discuss the carbon hotspots of dentistry and how these can be modified
 4. Evaluate the overall environmental impact of clinical dentistry and how this can be improved through innovation.
 5. Appraise how future healthcare professionals can help shape a sustainable healthcare system, and the knowledge and skills (such as leadership), change management and co-production that they will require.
 6. Evaluate current literature and participate in research on sustainability in dentistry.
- **Dentistry School/Department vs. Institution:** When “dentistry school” is specified in the

report card, this only refers to curriculum and resources offered by the School/department of dental 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 dental students, no matter where in the institution the resource comes from or if it is specifically targeted for dental students, can meet this metric.

- **Environmental history:** This is a series of questions students are taught to ask during medical encounters that elicits patients’ exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word “elective” refers to an optional course or lecture series that a student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.

- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.
- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalised 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.

Glossary of terms and abbreviations specific to this report:

UOM = University of Melbourne

MDHS - [The Faculty of Medicine, Dentistry and Health Sciences](#)

MDS - Melbourne Dental School

DDS1/2/3/4 - Doctor of Dental Surgery (which sits within the Faculty of Medicine, Dentistry & Health Science), numbers indicate the year level across the course

BOH1/2/3 - Bachelor of Oral Health (which sits within the Faculty of Medicine, Dentistry & Health Science), numbers indicate the year level across the course

RDHM - Royal Dental Hospital of Melbourne

DHSV - Dental Health Services Victoria

Planetary Health Curriculum

Section Overview: *This section evaluates the integration of relevant planetary health topics into the dental school curriculum. Today's dental students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that dental 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 dental school's core curriculum.*

Curriculum: General

| | |
|--|---|
| 1.1. Did your <u>dental school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare (ESH) / Environmental Sustainability in Dentistry (ESD) or Planetary Health in the last year? | |
| Yes, the dental school has offered more than one elective whose primary focus is ESH/ESD/planetary health in the past year. (3 points) | |
| Yes, the dental school has offered one elective whose primary focus is ESH/ESD/planetary health in the past year. (2 points) | |
| The dental school does not have any electives whose primary focus is ESH/ESD/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points) | |
| No, the dental school has not offered any electives on planetary health or electives that include ESH/ESD/planetary health topics in the past year. (0 points) | |
| Score Assigned: | 0 |
| <i>Score explanation:</i> MDS does not offer any elective that engages students in ESH, ESD, or Planetary Health. In addition, both BOH and DDS consist entirely of compulsory subjects, with no elective opportunities. | |

Curriculum: Environmental Threats to the Planet

| | |
|---|---|
| 1.2. Does your <u>dental school</u> address the concept of climate change, its causes and its impacts on humankind and biodiversity? | |
| 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 or other learning experiences (1 point) | |
| This topic was not covered. (0 points) | |
| Score Assigned: | 2 |

Score explanation:

Climate change is explored in depth within the dental school curriculum, as there are multiple learning outcomes and activities associated with the concept of climate change:

- In the first year DDS subject ‘*Professional Practice I*’, there are multiple lectures given on climate change and its impact on planetary health. These lectures include testable learning outcomes such as ‘*discuss the health effects of climate change*’ and ‘*summarise the major contributors to climate change*’.
- ‘*Professional Practise I*’ also includes interactive tutorials in which students do classroom activities related to climate change and their impact on planetary health.
- Students in ‘*Professional Practise I*’ are also given recommended readings which go into depth regarding climate change. These readings include:
 - The sixth assessment report by the IPCC on climate change published in 2022
 - ‘*Planetary Health, Climate Change, and Lifestyle Medicine: Threats and Opportunities*’ (Pathak, N., McKinney, A (2021). Planetary Health, Climate Change, and Lifestyle Medicine: Threats and Opportunities. Am J Lifestyle Med, 15(5), 541-552. DOI: [10.1177/15598276211008127](https://doi.org/10.1177/15598276211008127)

Whilst climate change is covered quite in depth within the DDS1 9-week sustainability block, it is not well embedded throughout other years and subjects within the DDS curriculum.

1.3. Does your dental school address the concept of pollution, its causes and its impacts on humankind and biodiversity?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

The concept of pollution is briefly addressed within the dental school curriculum. In the first year DDS subject ‘*Professional Practice I*’, there is a lecture that includes the learning outcome ‘*Outline how climate change’s effects impact human health through environmental exposure pathways, including natural disasters/extreme weather; changes in water quality and quantity, food insecurity, heat stress, air **pollution**, and vector-borne infections*’.

Although technically testable, content directly related to pollution is not included within lectures - however, there are references at the end of these lectures relating to pollution which students could explore on their own. One example of these references is ‘An overview of the environmental pollution and health effects associated with waste landfilling and open dumping’ (Siddiqua, A., Hahladakis, J.N., K A Al-Attiya, W.A. (2022) An overview of the environmental pollution and health effects associated with waste landfilling and open dumping. Environ Sci Pollut Res Int, 29(39), 58514-58536. DOI: [10.1007/s11356-022-21578-z](https://doi.org/10.1007/s11356-022-21578-z)) which explores the impact of pollution on the environment and humans.

1.4. Does your dental school curriculum address environmental citizenship, the impact of human choices and current and emerging environmental actions?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

The concept of environmental citizenship is explored in some depth within the core dental school curriculum, as multiple modules within the DDS and BOH courses include related activities and learning outcomes:

- The second year BOH subject '*Health Promotion 2*' includes seminar activities in which students must contemplate how they may alter the way they practise dentistry in order to reduce the impact on the environment.
- Second year BOH students are also given the UN SDG 12 as reading which discusses in depth the responsible consumption of dental materials e.g. reusable vs single-use items and their impact on the environment.
- The first year DDS subject '*Professional Practise 1*' includes learning outcomes such as 'outline how the ways in which provision of healthcare services contributes to climate change' which refer to the impact that clinicians have on the environment based on choices they make in their practice.

The above modules and activities encourage students to consider how their behaviours and actions may impact the environment. However, students are not currently taught how to quantify the impact of their actions on the environment which makes it difficult to create actionable change with regards to sustainable dentistry. Additionally, the curriculum does not explore and unpack students' attitudes towards these concepts which is essential in creating more environmentally responsible clinicians. This is being reviewed in the curriculum redesign for DDS 3.

Curriculum: Health Effects of Climate Change

1.5. Does your dental school curriculum address the impacts of climate change, air pollution and extreme weather events (extreme heat) on individuals' general health?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

The impacts of climate change, air pollution and extreme weather events on an individual's general health is explored in depth within the core curriculum. The DDS1 subject '*Professional Practice 1*' includes a task in which students are required to submit a 20-minute video presentation regarding the impact of determinants of health on individuals' health. More specifically, this task requires students to select a community that has been affected by a climate disaster e.g. cyclone-affected Queensland or drought-affected New South Wales.

In the same subject, a similar concept is covered by another module which has specific learning outcomes such as '*outline how climate change's effects impact human health through environmental exposure pathways, including natural disasters/extreme weather, changes in water quality and quantity, food insecurity, heat stress, air pollution, and vector-borne infections*'. This particular learning outcome is associated with a video lecture on '*How Climate Change is Affecting Our Health*' along with a few required readings such as '*Learning to treat the climate emergency together: social tipping interventions by the health community*' (Howard, C., Macneill, A. J., Hughes, F., Alqodmani, L., Charlesworth, K., De Almeida, et al. (2023). Learning to treat the climate emergency together: social tipping interventions by the health community. *The Lancet Planetary Health*, 7(3), e251–e264. DOI: [10.1016/S2542-5196\(23\)00022-0](https://doi.org/10.1016/S2542-5196(23)00022-0)).

Whilst the impacts of climate change on individual health is covered quite in depth within the DDS1 9-week sustainability block, it is not well embedded throughout other years and subjects within the DDS curriculum.

1.6. Does your dental school curriculum explore potential links or associations between oral health outcomes 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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

The links between oral health outcomes and climate change are explored briefly within the dental school's core curriculum. The DDS1 subject '*Professional Practice 1*' includes a module on '*Climate Change and Oral Health*', which has multiple learning outcomes related to the above concept, including:

- '*Outline possible mechanisms by which climate change will impact oral health*'
- '*Use a determinants of health framework to describe how climate change may influence oral health*'

The link between oral health outcomes and climate change is also addressed in the required completion of FDI's comprehensive three-hour [MOOC](#), as part of the sustainability course in '*Professional Practice 1*'. Examples include oral cancer in men, early childhood caries, periodontitis and cleft lip and/or palate.

Students in ‘*Professional Practice I*’ are also given readings such as ‘*Climate Change and Oral Health*’ (Hackley DM. (2021). *Climate Change and Oral Health*. *Int Dent J*, 71(3), 173-177. DOI: [10.1111/idj.12628](https://doi.org/10.1111/idj.12628)) which discusses the effects of climate change on oral health. It should be noted that there is little evidence currently available that shows direct links between oral health outcomes and climate change. Students are encouraged to consider the impact of climate change on determinants of health and how these determinants will affect oral health, however, this does not explicitly refer to the direct impacts of climate change on oral health.

Whilst the link between oral health and climate change is covered quite in depth within the DDS1 9-week sustainability block, it is not well embedded throughout other years and subjects within the DDS curriculum.

1.7. Does your dental 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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

In Melbourne Dental School’s DDS1 curriculum, students are required to take “*Professional Practice I*”, a core subject that includes a sustainability block focused on climate change and planetary health. Within this block, the module “*The impact of climate change on health*” provides an in-depth exploration of how environmental exposure pathways – including natural disaster/extreme weather, changes in water quality, food insecurity, air pollution and **vector-borne infections** – affects human health. The module encompasses reflection activities, a TEDx video, readings, diagrams and a lecture in relation to the topic. While this topic is explored in depth in this subject which is covered over 9-weeks, it is not well embedded throughout the core curriculum.

1.8. Does your dental school curriculum address the impact of anthropogenic and/or industry-related environmental toxins on human health?

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

Score explanation:

In the DDS1 curriculum under the subject DENT90141, students learn about amalgam and its management. Students are required to follow appropriate procedures for managing amalgam in both preclinical and clinical settings whenever amalgam is to be used during their 4 years of study.

In the subject ORAL10005 of the BOH1 curriculum, amalgam disposal and storage is taught in the form of a lecture which also touches on mercury toxicity. Moreover, an amalgam removal simulation session is conducted to help students learn the clinical procedure for future use of amalgam in both preclinical and clinical settings during the 3 years of study.

Clinical procedure:

THE FOLLOWING PROCEDURE IS TO BE FOLLOWED IN THE PRE-CLINICAL LABORATORY

1. Used amalgam capsules are to be placed in the container marked **AMALGAM CAPSULES**.
2. Scraps of amalgam left over from carving must be placed in the container marked **SCRAP AMALGAM**, which is filled with water.
3. Gauze used to clean the dispensing container must be placed in the rubbish bin.

DO NOT MIX THE CONTAINERS!

MAKE SURE THE LID TO EACH CONTAINER IS REPLACED!

ALL WASTE AMALGAM MUST BE CAREFULLY COLLECTED AND DISPOSED OF IN THE CORRECT MANNER - THIS IS AN OCCUPATIONAL HEALTH AND SAFETY PROCEDURE DESIGNED FOR YOUR PROTECTION!

1.9. Does your dental school curriculum address the outsized impact of climate change, pollution & anthropogenic environmental toxins 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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

In Melbourne Dental School's DDS1 module, "*Indigenous perspectives*", "*Health inequalities and climate change*" and "*Introduction to Planetary Health and Climate Change*", students are required to critically examine several articles and questions on the impact of climate change and pollution on marginalised populations. Students then explore this in more depth through their DDS1 assessment. The readings include:

- Melissa Nursey-Bray, R. Palmer, T. F. Smith & P. Rist (2019) *Old ways for new days: Australian Indigenous peoples and climate change, Local Environment*, 24:5, 473-486, DOI: [10.1080/13549839.2019.1590325](https://doi.org/10.1080/13549839.2019.1590325)
 - Explores Indigenous groups ongoing response to climate change and suggests support for Indigenous adaptation programmes which could build collaboration between Western and Indigenous modes of climate adaptation governance

- Deivanayagam, T. A., English, S., Hickel, J., Bonifacio, J., Guinto, R. R., Hill, K. X., Huq, M., Issa, R., Mulindwa, H., Nagginda, H. P., de Moraes Sato, P., Selvarajah, S., Sharma, C., & Devakumar, D. (2023). *Envisioning environmental equity: climate change, health, and racial justice*. Lancet (London, England), 402(10395), 64–78.
[https://doi.org/10.1016/S0140-6736\(23\)00919-4](https://doi.org/10.1016/S0140-6736(23)00919-4)
 - Discusses structural discrimination within society that drives disproportionate effects of climate change on the lives of minorities groups, migrants and Indigenous communities.
- IPCC report
 - Discusses the impact of climate change on Aboriginal and Torres Strait Islander Peoples, country and culture. These include loss of biocultural diversity, nutritional changes through the availability of traditional foods and forced diet change, water insecurity, increased vector-borne diseases and loss of land and culture.

Questions given to consolidate their understanding of the topic:

- “Explain how indigenous perspectives can play a crucial role in informing and enhancing efforts to mitigate and adapt to climate change.”
- “Low and middle-income countries, along with marginalized populations in various regions, have contributed minimally to climate change but are disproportionately affected by its health impacts. Why is this the case?”

Whilst the disproportionate impacts of climate change on marginalised populations is covered quite in depth within the DDS1 9-week sustainability block, it is not well embedded throughout other years and subjects within the DDS curriculum.

Curriculum: Sustainability

1.10. Does your dental school curriculum address the concept of environmental sustainability?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

In Melbourne Dental School’s DDS1 module “*Introduction to Planetary Health and climate change*” in the subject “*Professional Practice 1*”, the lecture included goes into detail on what is climate change and its impact. The module also includes a youtube video titled “*Planetary Health: The future is now*”, which goes into detail on planetary health and the importance of global sustainability. The module also includes several recommended readings, websites and links which further expand on climate change and planetary health:

- IPCC
 - The IPCC report describes the ongoing climate trends and impacts in Australia. It also discusses economic benefits, adaptations and impacts on Aboriginal and Torres Strait Islander Peoples, country and culture
- [United Nations - What is Climate change](#)
- [Planetary Health Alliance](#)

In the DDS1 module “*Sustainability and healthcare*”, the lecture goes into detail about sustainable health care and the environmental impacts of the healthcare sector currently. The lecture discusses definitions of sustainable healthcare, the carbon footprint of the health sector, reduction of environmental impacts of healthcare as well as outlining plans to shift to sustainable health care through introducing the “*4 principles of sustainable clinical practice/models of care*”. It emphasises the contributions of healthcare towards climate change and its need to shift to net zero carbon emissions.

In the Melbourne Dental School’s BOH curriculum, students are introduced to the United Nations SDG’s through a variety of learning material including a lecture, readings and the UN SDG game. Students also participate in a seminar activity where they discuss the intersection between SDG’s and health promotion. This is then followed by a 10 min group presentation requiring students to:

- *Briefly and clearly define and describe your area/s of the Ottawa Charter or the SDGs your group has been allocated in plain language.*
- *Give examples of where this area/action has been applied in general health promotion.*
- *Discuss how it has been or could be applied to oral health promotion.*

The Melbourne Dental School teaches “*minimal invasive dentistry*”, a philosophy that practices the nominalistic caries concept. This is a patient-centred approach that focuses on preventative dentistry and aims to prevent teeth from entering the restorative cycle if unnecessary - giving best long-term outcomes for the tooth and the patient. However, the teachings surrounding the concept of ‘*minimal invasive dentistry*’ are not specifically linked to environmental sustainability in the DDS core curriculum.

Whilst the concept of environmental sustainability is covered quite in depth within the DDS1 9-week sustainability block and briefly in BOH, it is not well embedded throughout other years and subjects within the DDS and BOH curriculum.

1.11. Does your dental school curriculum address the concept & importance of sustainable healthcare?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

In the DDS1 module “*Sustainability and healthcare*”, the lecture goes into detail about sustainable health care and the environmental impacts of the healthcare sector. It provides several definitions of sustainable health care. It discusses the impacts of climate change on health and healthcare services. It introduces the ethical paradox of health care and the climate crisis - introducing the large carbon footprint the health sector has on climate change. Emphasising that the healthcare sector should not be part of the issue, the lecture outlines global and national decarbonisation plans which suggests how healthcare staff can provide sustainable healthcare in their own practices. Learning outcomes for this modules include:

- *Define sustainable healthcare in the Australian context.*

- *Outline how the ways in which provision of healthcare services contributes to climate change.*
- *Discuss the ways climate change impacts the delivery of healthcare and related solutions.*

In the Melbourne Dental School's BOH curriculum, students participate in a seminar activity discussing promoting planetary health in dentistry and oral health. Students are also given a 30 min podcast to further their understanding on promoting planetary health in oral health care. Discussion prompts include:

- *What are some of your ideas for being more sustainable in oral health?*
- *How will you engage and educate your patients to ensure environmentally sustainable oral health care (in the way they care for their oral health, and also in the way we deliver care in the clinic)*
- *1 Min essay: Please share your key takeaway from this learning material and its links to health promotion.*

Whilst the importance of sustainable healthcare is covered in depth within the DDS1 9-week sustainability block and a single BOH activity, it is not well embedded throughout other years and subjects within the DDS and BOH curriculum.

As mentioned in the score explanation for metric 1.11, the Melbourne Dental School embraces the philosophy of "*minimally invasive dentistry*", although not specifically linked, aligns with the principles of sustainable healthcare.

1.12. Does your dental school curriculum address the carbon footprint of healthcare systems?

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

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

This topic was covered in **elective coursework** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

In the DDS1 module "*Sustainability and healthcare*", the lecture goes into detail about sustainable health care and the environmental impacts of the healthcare sector. It provides several definitions of sustainable health care. It discusses the impacts of climate change on health and healthcare services. It introduces the ethical paradox of health care and the climate crisis - introducing the large **carbon footprint** the health sector has on climate change. Emphasising that the healthcare sector should not be part of the issue, the lecture outlines global and national decarbonisation plans which suggests how healthcare staff can provide sustainable healthcare in their own practices. Learning outcomes for this modules include:

- *Define sustainable healthcare in the Australian context.*
- *Outline how the ways in which provision of healthcare services contributes to climate change.*
- *Discuss the ways climate change impacts the delivery of healthcare and related solutions.*

Whilst the carbon footprint of healthcare systems is covered in depth within the DDS1 9-week sustainability block, it is not well embedded throughout other years and subjects within the DDS curriculum.

1.13. Does your dental school curriculum address the concept & importance of sustainable oral healthcare?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

The DDS subject ‘*Professional Practice 1*’ contains a multiple week-long learning activity centered around the learning outcome ‘*Describe the impact of oral health care on the environment*’. Activities for students include lectures, self-research on online modules and required readings to answer questions on sustainable healthcare and the impact of health care provision on planetary health. Students are also asked to reflect the role of policy and advocacy in sustainable healthcare in dentistry.

In addition, the activity also requires completion of the [FDI’s comprehensive three-hour Massive Open Online Course \(MOOC\)](#) to address sustainability in dentistry, centering around the three learning outcomes of:

- *Understanding the role of dentists and dental teams in environmental sustainability*
- *Understanding the impact of oral healthcare on the environment*
- *Utilize evidence-based dentistry to improve oral health of your patients in an environmentally conscious way*

The BOH2 subject ‘*Health Promotion 2*’ includes a lecture which introduces the SDGs in relation to health promotion. Recommended readings linked to the activity also discuss dentistry in relation to the SDGs (Mulligan, S. (2023). The UN SDG 12 and oral healthcare provision: responsible consumption and production. BRITISH DENTAL JOURNAL, 235(12), 928–929.

<https://doi.org/10.1038/s41415-023-6703-y>)

‘*Health Promotion 2*’ also includes a 30-minute podcast on the topic of promoting planetary health in dentistry/oral health, after which students attend a seminar centred around discussion prompts such as ‘what are some of your ideas for being more sustainable in oral health?’. The FDI’s ‘[Consensus on Environmental Sustainable Oral Healthcare: A Joint Stakeholder Statement](#)’ (2022) is also included as a recommended reading for this activity.

Whilst sustainable oral healthcare is covered in depth within the DDS1 9-week sustainability block and BOH ‘*Health promotion 2*’, it is not well embedded throughout other years and subjects within the DDS and BOH curricula.

1.14. Does your dental school curriculum address the environmental impact of oral healthcare systems and interventions?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

The DDS subject '*Professional Practice 1*' contains a multiple week-long learning activity centered around the learning outcome '*describe the impact of oral health care on the environment*'.

Activities for students include lectures, self-research on online modules and required readings to answer questions on sustainable healthcare and the impact of health care provision on planetary health.

The lecture '*Sustainability and Healthcare*' in '*Professional Practice 1*' outlines the impacts of healthcare services on the carbon footprint, and its contribution to climate change. The lecture highlights the paradox of seeking to improve health outcomes with dental care, whilst also potentially contributing to the environmental disease burden.

In addition, one of the three learning outcomes in the FDI's MOOC is '*understanding the impact of oral healthcare on the environment*'. The key contributors to environmental damage in the context of oral healthcare are outlined as waste generation, chemical use, water use, transportation and energy consumption.

The subject '*Dental Research Project A*' contains three student led projects on planetary health. One of these projects focuses on conducting a waste audit within the Royal Melbourne Dental Hospital teaching clinic and the student's preclinical lab. The project spans from 2024 to 2025 and aims to measure production of waste and the environmental burden of MDHS. However, this project is completed by a small team of four students. The remaining DDS and BOH students may not gain the same level of exposure and in-depth understanding of the environmental impacts of their clinical and preclinical activities.

Whilst the environmental impacts of oral healthcare systems and interventions is covered quite in-depth within the DDS1 9-week sustainability block and as an elective for a small number of students in DDS2, it is not well embedded throughout other years and subjects within the DDS curriculum.

1.15. Does your dental school curriculum address the importance of measuring the environmental impact of oral healthcare to identify & reduce contributing factors?

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** or **other learning experiences** (1 point)

| | |
|---|---|
| This topic was not covered. (0 points) | |
| Score Assigned: | 1 |
| <p><i>Score explanation:</i></p> <p>The lecture ‘<i>Sustainability and Healthcare</i>’ delivered in the DDS subject ‘<i>Professional Practise 1</i>’ addresses the contribution carbon footprint by the oral healthcare sector. The lecture includes the contribution of the healthcare sector to the carbon footprint, and the call for reducing carbon emissions to net zero by 2040 by the Australian Medical Association and Doctors for the Environment Australia. However, there are no measurements mentioned relating specifically to the oral healthcare sector.</p> <p>The subject ‘<i>Dental Research Project A</i>’ contains three student led projects on planetary health. One of which projects focuses on conducting a waste audit within the Royal Melbourne Dental Hospital teaching clinic and the student’s preclinical lab. The project spans between 2024-25 and aims to implement suggestions to reduce waste and environmental burden by MDHS. However, this project is completed by a small team of four students. The remaining DDS and BOH students may not gain the same level of exposure and in-depth understanding of the importance of measuring environmental impact of oral healthcare.</p> | |

Curriculum: Sustainability through Good Oral Healthcare

| | |
|--|---|
| 1.16. Does your <u>dental school</u> curriculum address the importance of promotion of <u>good oral health</u> and <u>preventive care</u> in the delivery of <u>sustainable oral healthcare</u>? | |
| 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 or other learning experiences (1 point) | |
| This topic was not covered. (0 points) | |
| Score Assigned: | 2 |
| <p><i>Score explanation:</i></p> <p>The MDS places a heavy emphasis on preventative dentistry to reduce the burden of oral disease. The first year subject ‘<i>Diseases and Dentistry</i>’ introduces students to dental caries and periodontal disease, and focuses on the preventative nature of these plaque related diseases. This subject also introduces ‘<i>The Restorative Cycle</i>’ which explores the lifelong treatment a tooth receives, which eventually leads to extraction as more tooth structure is removed. Hence, MDS advocates for ‘<i>minimal intervention dentistry</i>’ in patient treatment planning. Treatment options are considered from least to most invasive, and to use preventative and non-surgical management (i.e. oral hygiene instruction, remineralisation) if possible.</p> <p>The lecture ‘<i>Sustainability and Healthcare</i>’ delivered in the DDS1 subject ‘<i>Professional Practise 1</i>’ also emphasises the need for ‘reduced healthcare demand’ to ‘shift to sustainable clinical care’. The four principles of sustainable clinical practice by the UK’s Centre for Sustainable Healthcare is outlined:</p> <ol style="list-style-type: none"> 1. Prevention 2. Patient empowerment and self-care 3. Lean systems and pathways | |

4. Use of low carbon alternatives (technologies and interventions)

However, this lecture addresses prevention leading to sustainable healthcare in general, rather than specifically to oral health care.

In addition, Module 2 in the FDI's MOOC is titled '[Sustainability through Good Oral Healthcare](#)'. DDS1 students are required to complete this module as part of the subject '*Professional Practise 1*', where the preventable nature of oral diseases, and how education and effective regimes can reduce the environmental burden of the oral healthcare sector. Whilst it is covered quite in depth within the DDS1 sustainability block which is covered over 9-weeks, it is not well embedded throughout the DDS curriculum.

In second year and beyond where DDS students enter the Royal Melbourne Dental Hospital as student clinicians, there are some discussions regarding how preventative dentistry reduces resource usage within the public hospital setting where funding is limited. Although not explicitly stated, this also leads to reduced environmental burden by the clinic. These are also individual learning experiences for students, rather than taught to the cohort as part of the core curriculum.

1.17. Does your dental school curriculum address the environmental significance of delivery of high-quality (operative care) oral healthcare?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

Module 2 in the FDI's MOOC is titled '[Sustainability through Good Oral Healthcare](#)'. DDS1 students are required to complete this module as part of the subject '*Professional Practise 1*', and will complete a section dedicated to 'Operative Care'. This is where students learn the significance of evidence-based practice, providing high quality and predictable care and undertaking care and attention to patients. The resulting 'durable treatment modalities that will require reduced repairs and replacements', which reduced greenhouse gas emissions through fewer patient journeys, reduced manufacture of materials and reduced need for resource distribution. However, this small section in the FDI's MOOC module is the only place within the core curriculum in which high quality operative care is linked to environmental sustainability, nor is it mentioned again beyond DDS. Therefore, this topic is not covered in depth.

The teaching principles within DDS also align with the University's commitment to high-quality oral healthcare. Though the positive environmental impact of such approaches may not be explicitly acknowledged, nevertheless they are outlined below.

The dental school strongly emphasizes evidence-based interventions, with a curriculum designed to educate students on providing holistic patient care. Clinical practice is guided by evidence-based literature to inform decision making. For example, DDS students in second and third year have bi-weekly periodontics seminars with required readings to deepen their understanding of periodontitis disease processes and effective intervention strategies.

In addition, effective and tailored treatment planning are explored in case studies, seminars, lectures and clinical discussions with demonstrators to equip students with the knowledge to design successful treatment plans that minimise the risk of failure and retreatment. One such example is the concept of treatment phases emphasised throughout the course, which highlights the importance of withholding ‘advanced management phase’ treatments such as fixed prosthodontics and endodontics until the ‘disease control phase’ is completed. This minimises the risk of wasted resource allocation on a failed treatment such as a root canal, if the patient’s periodontal health cannot be controlled.

Furthermore, a concept of the “restorative cycle” is taught in the Melbourne Dental School that emphasises minimum intervention dentistry to reduce the risk of weakening the tooth further resulting in more complex treatment such as root canal treatment and fixed prosthodontics. A lecture given in year two of the DDS program in *Principles of dental practice DENT90118* highlights the importance of repair and minimum intervention to reduce waste and pollution from fewer interventions that in turn require the use of fewer materials.

1.18. Does your dental school curriculum address the environmental significance of ‘integrated oral care’?

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

Score explanation:

As part of the core curriculum, students are also taught to take a holistic approach to patient care. A patient’s medical, dental, and social background must be considered before providing treatment. This foundation enables effective collaboration between patients and healthcare professionals, ensuring that care is tailored to each individual’s needs. Consequently, this approach supports high-quality, long-lasting treatment, reducing inefficiencies and minimizing the environmental impact of repeated procedures.

Module 2 in the FDI’s MOOC is titled ‘[Sustainability through Good Oral Healthcare](#)’. DDS1 students are required to complete this module as part of the subject ‘*Professional Practise 1*’, and will complete a section dedicated to ‘Integrated care’. This is where students learn how to achieve sustainable and efficient healthcare outcomes through the ‘seamless coordination of services, structured treatments, and active patient participation in decision-making’. The module also discusses involving patients in decision making related to the environmental costs of proposed treatments, enabling them to play a more active role in minimizing environmental impact. However, this small section in the FDI’s MOOC module is the only place within the core curriculum in which integrated oral care is linked to environmental sustainability. There is also no active discussion with patients regarding the environmental impact of their treatment decision. Therefore, this topic is not covered in depth.

1.19. Does your dental school curriculum address the importance, environmental & oral health outcomes of individual & dental team's ownership of care?

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

Score explanation:

Year 1 of the Doctor of Dental Surgery (DDS) program at the University of Melbourne dental school addresses the importance of ownership of care through the teaching of the role of antibiotics, antibiotic resistance, antibiotic stewardship and the impact on the environment. Students are informed of the importance of their role in antibiotic prescribing and its impact on both oral health outcomes and broader environmental health.

In the '*Professional Practice I*' (DENT90142) subject, use of alternative more sustainable intervention and techniques are taught in two lectures regarding digital health and electronic health records vs paper-based systems. In which the intended learning objective is to describe how digital technologies are used to manage health information and inform patient-centred care. Additionally, all students are to participate in the FDI Sustainable Dentistry MOOC and upload their certificate of completion to enhance their awareness and engagement with oral healthcare reputable environmental organisations and their resources.

In the second year of the DDS program, research projects in the '*Dental research project A* (DENT90119)' subject allows selected students to explore sustainable practices in the faculty. These projects focus on evaluating the integration of Education for Sustainable Development (ESD) and planetary health in the Melbourne Dental School through the PHRC research group and to quantify the amount of waste the school generates in the waste audits research group. The three student led projects are:

- Research 1: Undertaking the first PHRC at the University of Melbourne Dental School: A benchmark for sustainability and accountability
- Research 2: Green Dentistry Initiative: A Student-Led Quality Improvement Project to Reduce the Environmental Burden of Dentistry at the Melbourne Dental School.
- Research 3: Student-Led Development of Environmentally Sustainable Dentistry Educational Resources

Critical decision making between essential and elective dental procedures is taught throughout the course in both the DDS and BOH program through patient-centred treatment planning lectures, seminars, and clinical discussions that emphasizes the importance of treatment phases (ie disease control phase before advance management phase) that prioritises the most urgent treatment first before undertaking more complex treatment that generates a significant amount of waste.

The MDS curriculum emphasizes practice of evidence-based dentistry throughout all years of DDS and BOH, allowing students to provide high quality care that is both effective and sustainable.

1.20. In training for patient encounters, does your dental school's curriculum introduce

| strategies to have conversations with patients about the health effects of climate change? | |
|---|---|
| Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. (2 points) | |
| Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. (1 points) | |
| No, there are no strategies introduced for having conversations with patients about climate change. (0 points) | |
| Score Assigned: | 1 |
| <p><i>Score explanation:</i></p> <p>The Melbourne Dental School curriculum does introduce strategies to have conversations with patients about health effects of climate change, however it is limited to the Bachelor of Oral Health (BOH) program.</p> <p>In a BOH seminar, students are given a discussion prompt to respond to: <i>"How will you engage and educate your patients to ensure environmentally sustainable Oral health care (in the way they care for their oral health, and also in the way we deliver care in the clinic)."</i> to enhance understanding of planetary health in dentistry/oral health.</p> | |

Curriculum: Administrative Support for Planetary Health

| 1.21. Is your dental school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/Environmental Sustainability in Dentistry (ESD)/Planetary Health education? | |
|---|---|
| Yes, the dental school is currently in the process of making major improvements to ESH/ESD/planetary health education. (4 points) | |
| Yes, the dental school is currently in the process of making minor improvements to ESH/ESD/planetary health education. (2 points) | |
| No, there are no improvements to Planetary Health education in progress. (0 points) | |
| Score Assigned: | 4 |
| <p><i>Score explanation:</i></p> <p>The Australian Dental Council (ADC), which accredits dental programs in Australia, updated the ADC Professional Competencies of the Newly Qualified Practitioner, effective 2023. This means all Australian programs will need to update their curricula to ensure graduates can meet Domain 1.11: <i>"Recognise the environmental impacts of health care provision and use resources responsibly, making decisions that support environmentally sustainable healthcare."</i></p> <p>To keep updated with this new change, the Melbourne Dental School is undergoing a curriculum redesign, implemented over a 4-year period. As of 2024, the Doctor of Dental Surgery (DDS) program has rolled out year 1 of the new curricula mainly focused in DDS1 to achieve domain 1.11 for the new cohort intake graduating in 2027. However, senior cohorts (DDS2, 3, 4) continue to follow the old curricula. As a result, this report provides only a limited representation of</p> | |

sustainability and planetary health education in the MDS of 2024.

In year 1 Doctor of Dental Surgery (DDS) program, the majority of planetary health education is implemented in the *Professional Practice 1 (DENT90142)* subject. With an intended learning objective of “describe the impact of oral health care on the environment”. The following are a list of planetary health/ESD/climate change class, lectures, and activities that are taught in the subject:

- United Nations Sustainable Development Goals
- An introduction to planetary health and climate change
- The impacts of climate change on health
- Climate change and health
- Sustainable healthcare & the impact of health provision on planetary health
- Sustainability in-person workshops
- [FDI World Federation Sustainable Dentistry Massive Online Course \(MOOC\)](#)
- The impact of healthcare delivery on the environment

In year 2 DDS, the *Dental Research Project A (DENT90119)* subject includes 3 research projects on planetary health: PHRC group, waste audit group, and design based research approach to the development of resources for clinicians regarding planetary health.

In year 2 Bachelor of Oral Health, the *Health Promotion 2 (ORAL20001)* subject includes learning objectives related to planetary health:

- UN Sustainable Development Goals upon completing this topic you should be able to identify the social and environmental determinants of health and their influence on oral health outcomes.
- Promoting sustainability and planetary health in oral health: upon completing the learning you should be able to apply health education and health promotion theory to oral health promotion.

1.22. How well are the aforementioned planetary health/Education for Sustainable Healthcare/Environmental Sustainability in Dentistry (ESD) topics integrated longitudinally into the core curriculum?

Planetary health/ESH/ESD topics are **well integrated** into the core dental school curriculum. (6 points)

Some planetary health/ESH/ESD topics are appropriately integrated into the core dental student curriculum. (4 points)

Planetary health/ESH/ESD 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:

4

Score explanation:

Currently, at Melbourne Dental School, the majority of the information related to ESH, Planetary Health, and climate change is within the first-year curriculum of DDS in the *Professional Practice 1 (DENT90142)* subject. One of the intended learning objectives is to describe the impact of oral

health care on the environment through ESD/planetary health lectures and videos, reflection topics and questions, recommended readings, participation in the FDI Sustainable Dentistry MOOC and a case-based activity. Groups of 4-6 members are tasked to create a 20-minute video presentation of 1 of 4 Australian communities to examine how climate-related disaster events can impact the health of vulnerable communities, and communicate how this may influence oral health from a determinants of health perspective.

The following planetary health/ESD/climate change lectures are taught in the DDS1 curriculum:

- United Nations Sustainable Development Goals
- An introduction to planetary health and climate change
- The impacts of climate change on health
- Climate change and health
- Sustainable healthcare & the impact of health provision on planetary health
- Sustainability workshop
- FDI World Dental Federation Sustainable Dentistry MOOC
- The impact of healthcare delivery on the environment

Planetary health and climate change topics are integrated in the second-year curriculum as part of the *Dental Research Project A (DENT90119)* subject. This includes 3 student-led projects on planetary health: participation in the PHRC (marking the first time Melbourne Dental School is participating), waste audits at the clinical and preclinical labs, and a design-based research approach to the development of resources for clinicians regarding planetary health.

In year 2 Bachelor of Oral Health, the *Health Promotion 2 (ORAL20001)* subject includes learning objectives related to planetary health:

- UN Sustainable Development Goals upon completing this topic you should be able to identify the social and environmental determinants of health and their influence on oral health outcomes.
- Promoting sustainability and planetary health in oral health: upon completing the learning you should be able to apply health education and health promotion theory to oral health promotion .

1.23. Does your dental school appoint 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 **dental school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

No, the **dental school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)

Score Assigned:

1

Score explanation:

Ms. Bree Jones is the appointed member of faculty that oversees curricular integration of planetary health and sustainable healthcare.

| | |
|------------------------------|--------|
| Section Total (47 out of 70) | 67.14% |
|------------------------------|--------|

Back to Summary Page [here](#)

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 |
| <p><i>Score explanation:</i></p> <p>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 “<i>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.</i>” The initiative partners with various institutions in the university to coordinate research and engagement on key research themes around climate change.</p> <p>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 “<i>extend the existing ESG planetary justice research framework by applying a health lens.</i>”</p> <p>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 “<i>collaborative interdisciplinary network of researchers, educators, practitioners ... advancing knowledge and action at the nexus of climate change and health.</i>” 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.</p> | |

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|--|---|
| 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 |
| <p><i>Score explanation:</i></p> <p>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</p> | |

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 together climate and sustainability researchers, health and emergency service workers and climate impacted communities to explore and share ideas, skills and actions needed to create accessible guides and resources for healthy, just, regenerative and resilient ways of life.”

More examples of Climate Change and Planetary Health projects include: [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.

Furthermore, 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.

The [Social Equity Institute](#) is a leader in this space, with a commitment to co-design and collaboration, however, planetary health is not a current research focus area. The institute’s [Community Fellows Program](#) is a program through which research agendas may be set by communities, however there have been no projects focusing on climate change or environmental justice.

Similarly, 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. However, to the best of our ability, we could not find evidence of this model applied to research on planetary health, climate change or environmental justice.

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:

Given the multiple centres and institutions engaging with health and the environment within the University of Melbourne, we acknowledge the difficulty of centralising research, events, and opportunities at the institution. 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 (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.

[Melbourne Climate Futures \(MCF\)](#) 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, however, this webpage does not appear to be comprehensive. 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)

| | |
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| 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 |
| <p><i>Score explanation:</i></p> <p>The university hosted various singular 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:</p> <ul style="list-style-type: none"> • 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 <p>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.</p> | |

| | |
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| 2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation? | |
| Yes, the institution is a member of a national or international planetary health or ESH/ESV organisation. (1 points) | |
| No, the institution is not a member of such an organisation. (0 points) | |
| Score Assigned: | 1 |
| <p><i>Score explanation:</i></p> <p>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.</p> | |

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|-------------------------------------|---------------|
| Section Total (12 out of 17) | 70.59% |
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Back to Summary Page [here](#)

Community Outreach and Advocacy

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

3.1. Does your **institution** partner with community organisations to promote planetary and health?

Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)

Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)

The **institution** does not partner with community organisations, but has participated 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 |
| <p><i>Score explanation:</i></p> <p>Various community facing seminars and events were offered in 2024. Some examples include</p> <ul style="list-style-type: none"> - 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 <u>institution</u> 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 |
| <p><i>Score explanation:</i></p> <p>The University of Melbourne does not currently have any regular or relevant communications specifically focused on sustainable healthcare. However, there is a dedicated website that provides updates on planetary health. Featuring the Sustainable campus news and events, which keeps staff and students informed about sustainability related activities and events. Staff and students can also subscribe to the sustainable newsletter team to stay updated on campus-wide sustainability initiatives. However, participation in regular communications with the sustainability team is entirely optional and left to individual preference.</p> <p>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</p> | |

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 providers. (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 is not offered at RDHM and 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 <u>all</u> 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> | |

| 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 <u>all</u> 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>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</p> | |

(approx 5 full-time students in 2024) and that University of Melbourne's affiliation has ceased in 2025.

[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%

Back to Summary Page [here](#)

Support for Student-Led Planetary Health Initiatives

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

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 web page 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 institution and/or contact of information of potential mentors.

The institution has a web page 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 web page 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 |
| <p><i>Score explanation:</i></p> <p>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).</p> <p>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).</p> <p>There are no dentistry specific websites or activities that inform students on planetary health and sustainable healthcare at the institution.</p> <p>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.</p> | |

| | |
|--|---|
| 4.4. Does your <u>institution</u> 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 |
| <p><i>Score explanation:</i></p> <p>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 organisation dedicated to planetary health.</p> <p>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</p> | |

for a particular event or project. Technically, the group is not currently registered with the institution due to administrative 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.

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

1. **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.
2. **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.
3. **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.
4. **Sustainability Action Group:** A [new sustainability action group](#) with faculty support is in the very early stages of being established, although no visible progress was made in 2024-2025 period. It will ideally be a student-led group (including medicine, nursing, and allied health students) with faculty support, and will aim to support and enhance sustainability practices within the MDHS (Medicine, Dentistry and Health Sciences) school. Since this group has not yet been formally established or commenced, it cannot fulfil the criteria at this stage.

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

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

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

Score Assigned:

0

Score explanation:

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 <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each) | Score |
|--|-------|
| Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects. | 1 |
| Panels, speaker series, or similar events related to planetary health that have students as an intended audience. | 1 |
| Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts. | 0 |
| Cultural arts events, installations or performances related to planetary health that have students as an intended audience. | 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 |
| <p><i>Score explanation: Insert explanation here.</i></p> <ol style="list-style-type: none"> 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% |
|-------------------------------------|---------------|

Back to Summary Page [here](#)

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 dental 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 under development at the moment to focus 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> | |

| 5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy? | |
|---|---|
| Yes, institution buildings are 100% powered by renewable energy. (3 points) | |
| Institution buildings source >80% of energy needs from off-site and/or on-site renewable energy. (2 points) | |
| Institution buildings source >20% of energy needs from off-site and/or on-site renewable energy. (1 point) | |
| Institution buildings source <20% of energy needs from off-site and/or on-site renewable energy. (0 points) | |
| Score Assigned: | 1 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>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.</p> | |

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 |
| <p><i>Score explanation:</i></p> <p>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.</p> | |

| 5.6. Does your <u>institution</u> 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Conventional recycling bins are located throughout the Parkville campus.</p> <p>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.</p> <p>Front of house container deposit collections are currently being trialled at the Student Pavilion through Scouts Victoria's Container Deposit Scheme (CDS).</p> | |

[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 **adequate** sustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

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

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

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

Score Assigned:

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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>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.</p> | |

| 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>A Sustainable Events Policy and a Sustainable Events Accreditation are currently being developed by the Campus Management Sustainability Team.</p> | |

| 5.10. Does your <u>institution</u> 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>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.</p> <p>A laboratory sustainability website with guidelines and resources for reducing the environmental impact of laboratories at the University of Melbourne is currently in development.</p> | |

| 5.11. Does your <u>institution's</u> 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 |
| <p><i>Score explanation:</i></p> <p>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.</p> <p>As per the most recent reporting, the University of Melbourne continues to invest in fossil fuels.</p> | |

| | |
|------------------------------|--------|
| Section Total (21 out of 32) | 65.63% |
|------------------------------|--------|

Back to Summary Page [here](#)

Grading

Section Overview

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

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

Planetary Health Grades for the Melbourne Dental School

The following table presents the individual section grades and overall institutional grade for the Melbourne Dental School on this dental-school-specific Planetary Health Report Card.

| Section | Raw Score % | Letter Grade |
|---|--|--------------|
| Planetary Health Curriculum (30%) | $(47/70) \times 100 = 67.14\%$ | B |
| Interdisciplinary Research (17.5%) | $(12/17) \times 100 = 70.59\%$ | B |
| Community Outreach and Advocacy (17.5%) | $(10/14) \times 100 = 71.43\%$ | B |
| Support for Student-led Planetary Health Initiatives (17.5%) | $(11/15) \times 100 = 73.33\%$ | B |
| Campus Sustainability (17.5%) | $(21/32) \times 100 = 65.63\%$ | B |
| Institutional Grade | $(67.14 \times 0.3 + 70.59 \times 0.175 + 71.43 \times 0.175 + 73.33 \times 0.175 + 65.63 \times 0.175) = 69.31\%$ | B |