

Planetary Health Report Card (Pharmacy):

University of Auckland



2024-2025 Contributing Team:

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Summary of Findings

Overall Grade

Curriculum

The current curriculum helps prepare students for real-life clinical settings and provides essential knowledge on climate change impacts. Topics covered include antimicrobial resistance, inequities caused by climate change, and the environmental impacts of certain dosage forms, but more topics could be added. For example, integrating discussions about environmental impacts of medicines when creating care plans for patients, or teaching about how certain conditions may be exacerbated by climate change. Therefore, to remedy this, climate change impacts should be taught wherever possible and students encouraged to think of these as a valid reason to recommend an alternative therapy, all of which can be done without huge structural change to the current curriculum.

Interdisciplinary Research

The University currently holds planetary health talks and is a member of an international planetary health organisation, both of which are improvements on last year. However, little progress has been made in integrating the wider community and the most deteriorating planetary health issues they face as part of research. There is also little centralisation of planetary health initiatives at the University that are easy to access and use. Going forward, better community engagement and development of centralised resources will allow people to get more involved in the University's planetary health efforts.

Community Outreach and Advocacy

National initiatives have meant that there is information available to patients of all healthcare facilities associated with the University and students are taught to recommend these to patients. However, there is little interaction with the community in the form of providing events or courses, or providing information to students about sustainable healthcare. Going forward, organisation of events designed for the wider community and that are well-advertised will be beneficial in informing the public of issues/initiatives, and regularly updating students on sustainable healthcare will allow them to see and implement new strategies in future practice.

Support for Student-Led Initiatives

Currently, the University does well to integrate students into a number of planetary health initiatives across the faculties and ensure their voices are heard when making institutional decisions with representatives on the Sustainability Management Group. However, this involvement could be improved with better access to research projects regarding planetary health and a means to provide aid to students who wish to complete their own project rather than select from a predetermined list which may or may not have a sustainability project.

Campus Sustainability

The University of Auckland has improved its campus sustainability with complete divestment from fossil fuels and removal of any fossil fuel investments from its portfolio during 2024. There are also a number of published guidelines to foster better sustainability during events and other activities on campus. However, to improve in this area, the University could better enforce these and provide more detail around sustainability in supply procurement and food/beverage selection. There could also be information provided as to investment in renewable energy companies and further changes implemented to promote environmentally-friendly transport options, such as public transport by creating free/discounted shuttles between the different campuses and nearby bus/train hubs.

B+

C

C+

B

B-

B

Statement of Purpose

Planetary health is human health.

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

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

With the purpose of increasing planetary health awareness and accountability among 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) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

• **Planetary Health:** is described by the Planetary Health Alliance as "the health of human civilisation and the state of the natural systems on which it depends." For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional 'environmental health' examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc.

Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.

- Sustainable Healthcare: As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- Education for Sustainable Healthcare (ESH): is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 - 1. Describe how the environment and human health interact at different levels.
 - 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 - 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- Pharmacy School/Department vs. Institution: When "Pharmacy school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of pharmacy and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by pharmacy students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.
- Environmental history (Metric #19 in Curriculum Section): This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after

flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- Clerkship / Outreach: This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- Clinical rotation: This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- Climate justice: The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.
- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- Low socioeconomic status (SES): An individual or geographical area that across a

variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.

- Low and Middle-Income Countries (LMIC): Countries that have lower degrees of economic affluence.
- Anthropogenic: Created through human activity
- **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 <u>Literature Review by Metric</u> is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

<u>Section Overview:</u> This section evaluates the integration of planetary health topics into the pharmacy school curriculum. Today's pharmacy students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that pharmacy students understand planetary health issues and principles.

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

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

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

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

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

Score Assigned:

Score explanation: The score of two was assigned as the issues regarding the impacts of extreme weather events to individual health and healthcare systems were mentioned briefly in the 'Infectious disease in a changing climate' lectures in Pharmacy 213. The lectures mainly centred around how extreme climates changes such as floods, storms, drought and rise in sea levels contribute significantly to the health community and individual living in areas hit by these natural disasters. Changes in climates like extreme weather events lead to vulnerability in socio-political conditions, socioeconomic factors, individuals' health and on-hand resources ultimately causing health outcomes such as injury and mortality from extreme weather events, respiratory issues, vector-borne disease, heat-related issues and food-borne disease.

2

However, the lectures didn't go in-depth specifically on extreme weathers but covers the prevention and protections against the infectious disease such as vaccinations, infection controls, hygiene and quarantine throughout. Moreover, there wasn't any specific instance where the pharmacy school included any workshops or interactive lessons about the impact of extreme weather events, therefore a score of two is justified.

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

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

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

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

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

Score Assigned:	2
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Score explanation: Medicines pollution is mentioned in workshops and lectures, but there was not an instance where the impact these pollutants have towards the environment are explained. Moreover, in the lecture titled "Sterilisation" in Pharmacy 213, the handling of hospital and medical waste is mentioned but, likewise, the direct cause of the waste is not mentioned. In terms of ecological impact, the antimicrobial lectures describe how the usage of said antimicrobials affects the economy. For example, their overuse can lead to antimicrobial resistance, harming agriculture – as the water systems become contaminated by resistant bacteria – and leading to economic loss. Therefore, as the environmental impact of medicines in these various scenarios were explained briefly in the 2024 curriculum, a score of two is justified.

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

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

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

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

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

Score Assigned:

Score explanation: The presentation titled "Introduction to Environmental Sustainability with a Focus on Pharmacy" in the course Pharmacy 213 discusses the environmental effects of pharmaceutical manufacturing and waste. It focuses on concerns such as pharmaceutical waste management in New Zealand, the carbon footprint of pharmaceuticals, and the ecological impact of APIs in water systems. The pharmacist's involvement in improving environmental sustainability through proper medicine disposal and reasonable use is also emphasised.

3

In addition to the lecture on environmental sustainability and pharmacists' roles in decreasing pharmaceutical waste, the curriculum included an interactive debate workshop that examined pharmaceutical corporations' responsibility for the waste caused by their goods. The workshop debate allowed students to analyse, articulate, and reject comprehensive arguments about sustainability, corporate responsibility, and environmental effects.

The session required disciplined preparation and active involvement, with students developing well-reasoned arguments and engaging with opposing viewpoints. This hands-on activity indicates a more in-depth investigation of the topic, going beyond theoretical knowledge to include critical thinking, conversation, and practical learning. Which justifies the score being three.

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

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

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

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

This topic was not covered. (0 points)	
Score Assigned: 2	2

Score explanation: The lecture "Introduction to Environmental Sustainability with a Focus on Pharmacy" in the course Pharmacy 213 touched on the carbon footprint of healthcare systems. It discussed the environmental impact of pharmaceuticals, including emissions from their production, transportation, and use. Specific examples, such as the carbon footprint of metered-dose inhalers and the significant carbon emissions from New Zealand's healthcare sector, were included.

Although the topic was addressed and related to pharmacy practice, it was not covered extensively across multiple sessions or integrated deeply into the curriculum. Since this content was limited to a single lecture, the coverage is considered brief, justifying a score of two.

1.5. Does your pharmacy school curriculum address the impact of climate change on the changing patterns of infectious diseases and increased antimicrobial resistance?

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

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

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

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

Score Assigned:

Score explanation: In Pharmacy 213, lecture 11 of the Infectious Diseases module, named "Infectious diseases in a changing climate," explores the impacts of climate change on infectious disease patterns. It highlights the influence of diseases and particularly explains how environmental and socio-economic factors contribute to disease prevalence in certain regions. The learning objectives also cover key topics such as methods for prevention and global challenges in controlling infectious diseases. Additionally, antimicrobial resistance is covered in detail in the lecture "AMS: Principles of antimicrobial use," which emphasises the increasing global use of antimicrobials and the impact of COVID-19 and other infectious diseases on AMR. Furthermore, the contents of these lectures were directly assessed in the End-of-module test. Therefore, a score of three has been awarded.

3

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

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

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

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

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

Score Assigned:

Score explanation: In 2024, the course Pharmacy 311 explored the impacts respiratory medicines have on the environment in Lecture 8 "Inhaled drug delivery: design and formulation considerations". This looked at the formulation of the drug alongside a propellant and the subsequent disposal of the inhaler once it ran out of doses. As most inhalers are made of plastic and the propellant is a form of pharmaceutical waste (as this is often still present despite the drug having run out), it creates a large carbon footprint.

Unfortunately, the bidirectional relationship was not taught with there being no teaching on the impacts of climate change and air pollution to respiratory health. Due to this, a score of zero has been awarded.

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

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

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

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

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

Score Assigned:

Score explanation: This topic was not covered as part of the curriculum in 2024. Hence, a score of zero has been given.

0

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

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

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

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

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

Score Assigned:

Score explanation: As the relationship between climate change and allergies was not explored in the curriculum this has been given a score of zero.

0

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

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

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

This topic was covered in elective coursework. (1 point)		
This topic was not covered. (0 points)		
Score Assigned: 0		
Score explanation: The mental health and neuropsychological effects of environmental degradation		

and climate change were not discussed as part of the 2024 curriculum, hence a score of zero has been given.

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

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

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

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

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

Score Assigned:

Score explanation: In Pharmacy 213, the lecture "Infectious diseases in a changing climate" discusses the relationship between the social determinants of health, exposure pathways, health system capability and resilience, and climate change is shown. The downstream effects on both patients and existing infrastructure caused by climate change induced variation in the social determinants is also illustrated. However, since this was only a single slide that did not fully explore the complexity of this relationship, a score of two has been assigned.

2

1.11 Does your pharmacy school curriculum address the relationship between climate change and social determinants of health (e.g., reduced nutritional value of food)?

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

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

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

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

Score Assigned:

Score explanation: The impact of climate change on the social determinants of health was briefly covered in the Infectious Diseases module in Pharmacy 213 as a part of the climate change lecture. While the provided example of reduced nutritional value of food was not covered, other determinants were considered using the <u>four A's</u> of affordability, accessibility, availability, and acceptability. For example, there was learning about how regions experiencing a greater number of

catastrophic events have fewer resources, including healthcare facilities, and how accessing these services can be challenging. Water quality in various areas was also discussed. Therefore, a score of two has been given.

1.12. Does your pharmacy school curriculum address the environmental and health co-benefits of a plant-based diet?

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

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

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

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

Score Assigned:

Score explanation: Within the Pharmacy 213 gastrointestinal module, a few lectures addressed diet, including a dedicated session on nutrition and another focused on patients with irritable bowel syndrome (IBS). These lectures discussed the FODMAP diet, which encouraged IBS patients to reduce processed foods and incorporate more plant-based options, briefly touching on the direct health benefits. However, the co-benefits of plant-based diets—such as environmental advantages, like reduced greenhouse gas emissions from lower demand for animal products—were not explored. Therefore, a score of zero has been given, as this aspect was not covered in the curriculum.

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

Score explanation: In compounding labs as part of Pharmacy 212, students are informed and provided with strategies to minimise the use of single-use plastics and packaging for compounded medicines.

The Clinical and Professional (C&P) skills module discusses the benefits of non-pharmaceutical management of conditions such as participating in yoga classes, light exercise like walking, and healthier eating styles. The idea of social prescribing was also touched on in the non-pharmaceutical treatment sections of care plans, reinforcing the importance of lifestyle changes as part of treatment, rather than using a solely medicines approach. <u>Green Prescriptions</u>, where health professionals contact their patients semi-regularly to encourage exercise, were also discussed. These non-pharmaceutical treatment options are touched on in every module from gastrointestinal where modifications to diet are trialled for those with irritable bowel syndrome, to cardiovascular where aerobic exercise is encouraged for patients with high cardiovascular disease risk.

The impact of active metabolites/unchanged drug products on ecological systems was briefly explored as part of the pre-lab activities for the 'Analysis of Salbutamol' lab in Pharmacy 311. This lab helped students to understand how salbutamol degrades and how its lack of doing so can pollute waterways and other areas of the environment.

While the pharmacy school does cover deprescribing, information on disposal of medicines and benefits of non-pharmacological managements of various conditions, the link of these actions to their environmental benefit is not explicitly made and thus cannot be scored. The impact of extreme heat, anaesthetic gases, and over-prescribing is also not discussed, thus all these criteria also receive a zero.

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

2

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

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

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

This topic was not covered. (0 points)

Score Assigned:

Score explanation: Overall, the curriculum touches briefly on this topic. For excipients and particular dosage forms, in Pharmacy 212 and Pharmacy 213, some content is covered about the health impacts of certain excipients but not in regards to their environmental impacts. However the importance for safe wastage of medication delivery devices such as single-use syringes was discussed in workshops such as the sterilisation, disinfection and filtration workshop. Teaching staff mentioned that although single-use syringes are quite wasteful, their importance within drug administration routes is crucial.

Another example of this is in the respiratory module of Pharmacy 311 in the lecture "Inhaled drug delivery: design and formulation considerations". This looks at how drugs in a metered-dose inhaler (MDI) must be formulated alongside a propellant which is not completely used up by the time the drug is. There is also the fact that many inhaler bodies are made of plastic, leading to a slow breakdown process once they are discarded. While this information is not provided on the slide, it was discussed further in class and provided in the lecture recording.

Due to this relatively brief coverage across the curriculum, a score of two has been given.

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

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

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

Yes, there are some examples of having conversations with patients about climate change in elective coursework. (1 point)

No, there are not strategies or examples for having conversations with patients about climate change (0 points)

Score Assigned:

Score explanation: In the course Pharmacy 213, there was no teaching about strategies or examples of how to converse with patients regarding climate change. The clinical and communication skills learnt in 213 are foundational for much of the rest of the course – thus teaching of these skills in later years does not occur – and mostly consisted of using appropriate non-verbal and verbal actions, empathy, medications knowledge, checking legal checks on prescriptions and suggesting to patients about advice regarding their health. There were no specific mentions in workshops and lectures about the need to mention climate changes for training for patient communications. Moreover the importance of marking a criteria for mentioning about climates change hence justified a score of zero.

0

1.16. Does your pharmacy school curriculum guide students to consider the environmental impact of medications as a factor in addition to safety, efficacy, cost, and pill burden when comparing equivalent therapies?

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

This topic was briefly covered in the core curriculum. (2 points)		
This topic was covered in elective coursework. (1 point)		
This topic was not covered. (0 points)		
Score Assigned:	0	

Score explanation: Students are not guided as part of the pharmacy curriculum to consider the environmental burden of medications that they recommend.

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

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

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

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

Score Assigned:

Score explanation: The University of Auckland School of Pharmacy has acknowledged the importance of planetary health education and is making relevant and appropriate changes to the curriculum to correct any deficiencies. An example of this is shown by the implementation of new teaching into the curriculum, such as discussion of the carbon footprint of healthcare systems in the lecture 'Introduction to Environmental Sustainability with a Focus on Pharmacy' which was not covered in 2023. There is also ongoing planetary health research at the University across <u>many of the faculties</u>.

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At the School of Pharmacy, the laboratory spaces received <u>MyGreenLab</u> accreditation in the middle of 2024. This is recognised as part of the United Nations' campaign 'Race to Zero' and is considered to be a gold-standard for sustainable laboratory spaces.

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

Yes, there is/are a member(s) of faculty whose role is directly responsible for the incorporation of planetary health and sustainable healthcare as a theme throughout the curriculum (4 points)

Yes, there is/are member(s) of faculty who are incorporating planetary health and sustainable healthcare as a theme throughout the curriculum as well as doing their principle role (2 points)

There are no members of faculty who are incorporating planetary health and sustainable healthcare as a theme throughout the curriculum (0 points)

	Score Assigned: 2	2
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Score explanation: While some faculty members are incorporating planetary health and sustainable healthcare into their lectures or the modules they lead, this is not a heavy focus throughout the curriculum.

Thus, some considerations of climate and environmental impact are explored in certain modules, such as "Infectious diseases and climate change" in the Pharmacy 213 Infectious Diseases module and in the sustainability debate as part of our Clinical and Pharmacy Practice module.

However, in other modules, there is very little. Due to this, there is some evidence of dedicated staff members providing education on climate impacts within the curriculum, but it is currently limited to particular modules where they are more heavily involved. For this reason, a score of two has been given.

1.19. Does your pharmacy school curriculum offer clinical practice experiences (for example, IPPE/APPE rotations in the U.S. or placement opportunities in the UK) that allow for the exploration of planetary health topics?

There are multiple clinical practice experiences/placements that allow for direct exposure to planetary health topics. (3 points)

There is one available clinical practice experience/placement that allows for direct exposure to planetary health topics. (2 points)

There are available clinical practice experiences/placements that allow for indirect exposure to planetary health topics. (1 point)

No, there are no such clinical practice experiences/placements available through the pharmacy school. (0 points)

Score Assigned:

Score explanation: In each year of the Bachelor of Pharmacy, students are sent on placement in various settings. In second year, this involves a day in industry, three days in hospital, and three days in community. In third year, this shifts to two weeks in community and two weeks in hospital, with a similar format being followed in fourth year but with the option to do placement in a government organisation should this be desired.

1

During these placements, more emphasis is placed on practical skills of being a pharmacist, with students learning what the various responsibilities of a pharmacist are in each of these settings. However, this is not to say that there is no discussion of these topics whatsoever. For example, there is information on how production processes are modified to minimise environmental impact, or how safe disposal of medicines is handled to minimise any potential introduction of infectious/toxic substances into the environment. Unfortunately, as there is little emphasis placed on this information and it is not the main point of these placement experiences, a score of one has been given.

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

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

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

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

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

Score Assigned:

Score explanation: The issue of climate change and its disparate effects on vulnerable populations was briefly addressed in the 'Infectious Diseases in a Changing Climate' lecture in Pharmacy 213. This lecture focused on how climate change impacts the emergence and spread of diseases. It also covered how it disproportionately affects populations, such as low-income groups, who may struggle to access healthcare or cannot afford services in such climates. Additionally, it discussed how immunocompromised individuals (e.g., the elderly and those with comorbidities) are more prone to disease in a changing climate. Therefore, a score of two has been assigned for this topic, as it was briefly covered as a smaller portion of a broader module rather than discussed in depth.

2

Section Total (30 out of 66)

45.45%

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Interdisciplinary Research

<u>Section Overview:</u> 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 <u>institution</u>?

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)

2

Score Assigned:

Score explanation: Within the Faculty of Medical and Health Sciences, there are some members who conduct research in areas related to planetary health or have 'climate change impacts and adaptation' as one of their listed research interests. However, for many of these staff members, this is not their primary focus of research and is often listed alongside a large number of other fields that they are interested in, thus they are not always looking into this field. Due to this, a score of two has been given.

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

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:	1
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Score explanation: At the University of Auckland there is a <u>School of Environment</u> but this is not a part of the Faculty of Medical and Health Sciences (FMHS) where all healthcare-related schools are situated. As well as this, the degree to which the School of Environment focuses on planetary health and how freely they are able to interact with FMHS is unknown. However, as there is a school within the University of Auckland that has some focus on planetary health but interdisciplinary research between them and the schools of FMHS is not well supported, a score of one can be given.

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 <u>institution</u>?

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:

Score explanation: In the research conducted by the Faculty of Medical and Health Sciences (and the wider University), there is no process by which those who are disproportionately impacted by climate change are able to provide feedback about what should be looked into. This is only possible if they themselves are part of the research team, making it difficult for communities to make their concerns heard. For this reason, a score of zero has been given.

0

2.4. Does your <u>institution</u> 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
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Score explanation: The <u>research and teaching for sustainability</u> page on the University of Auckland website contains further links to actions (research or teaching) being undertaken at each of the faculties across the entire campus and by whom this research is being carried out. However, this page does not contain any information about relevant funding opportunities or upcoming events, thus only a score of two can be given.

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

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

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

Yes, the **institution** has hosted a conference on topics related to planetary health / sustianable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:

Score explanation: Within the University of Auckland, there is a Sustainability Teaching Network that holds a monthly one-hour Zoom meeting where teaching staff and the occasional external speaker will give a presentation about how they have gone about teaching planetary health/sustainable development goal (SDG) content, or how they have included sustainability practices as part of their teaching. Members of the Faculty of Medical and Health Sciences have also presented during these meetings and regularly attend seminars.

4

More information about the teaching network can be found as a part of the University of Auckland's <u>SDG summary for 2024</u>.

Other initiatives within the Faculty of Medical and Health Sciences include the School of Pharmacy's organisation of two one-hour workshops about data management and sustainability following the retreat mentioned as part of the 2023-24 report card. Te Kupenga Hauora Māori also hosted a one-hour planetary health webinar in October that was primarily advertised to staff but technically open to all interested parties.

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	
<i>Score explanation:</i> The University of Auckland is <u>Universities</u> (APRU). APRU aims, through collab major challenges facing the Pacific region in futur includes a focus on sustainability. As well as this, the University is involved as part alongside other organisations and institutions whi challenges facing the Pacific, one of which is the score of one has been given.	a member of the <u>Association of Pacific Rim</u> poration, to find practical solutions to some of the re. To guide this, one of the strategic priorities of the <u>Centre for Pacific and Global Health</u> ch, similar to APRU, aims to find solutions to changing climate. Due to these involvements, a	

Section Total (10 out of 17)

58.82%

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Community Outreach and Advocacy

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

3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?

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

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

The **institution** does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)

2

No, there is **no** such meaningful community partnership. (0 points)

Score Assigned:

Score explanation: As part of its <u>Sustainability Strategy</u>, the University of Auckland has made extension of local, national, Pacific and global partnerships valuing sustainability a priority. This includes supporting members of the University to forge links with <u>local iwi</u>, various industries (with different faculties having different partners), and non-government organisations (NGOs). It also involves a commitment to continued partnership with local and central government, and the Auckland Council, on sustainability challenges. However, there is no information as to what these partnerships entail and how planetary health is promoted through them, thus a score of two has been given.

3.2. Does your <u>institution</u> 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/medical school** have not offered such community-facing courses or events. (0 points)

Score Assigned: 2

Score explanation: The University of Auckland does not regularly provide community-facing events regarding planetary health. However, there are still interdisciplinary groups that work between the faculties, namely Ngā Ara Whetū – also known as the Centre for Climate, Biodiversity and Society – who host workshops and planetary health events for people to participate in. They also offer scholarships to candidates whose proposed research aligns best with their mission to contribute to planetary wellbeing.

A planetary health webinar was also organised by Te Kupenga Hauora Māori, a group more closely related to the Faculty of Medical and Health Sciences within which the Schools of Medical Sciences, Medicine, Nursing, Optometry, Pharmacy, and Population Health exist. While this webinar was mostly advertised to staff, it was open to all who wished to come.

Unfortunately, as these workshops and events are not well advertised beyond the University space, only a score of two can be given as, yes, they are open to all, but it is not made known to everyone who may be interested.

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:

Score explanation: The University of Auckland has a subpage on their website titled 'News and opinions' which contains a <u>'Sustainable impact'</u> section beneath it. On this website, projects from the multiple faculties making up the University are discussed, including the Faculty of Medical and Health Sciences of which health-related degrees are a part of. Communications are also emailed to students on a semi-regular basis that sometimes contain projects that relate to planetary health; however, these are not always from a health-focused degree perspective.

1

As students are able to access news and communications provided by the institution regarding planetary health albeit infrequently, a score of one can be given.

3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)

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

1

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

Score Assigned:

Score explanation: <u>Sustainable Healthcare Aotearoa</u> have started developing educational material that is spread to health professionals around the country via email. For those who are not on the mailing list, they also have a website and YouTube channel where resources can be accessed.

Te Whatu Ora (Health New Zealand) also has a sustainability team at both regional and national levels, led by Rick Lomax. However, due to a change in government in 2023 and cuts to health services, it is unknown whether or not this team will remain in operation going forward. In addition to this, some of the individual regions have put together sustainability teams for their hospitals with <u>Waitaha Canterbury</u> being an example. Healthify also provides a page for <u>continuing professional</u> <u>development</u> but not all of the resources listed on the page are related to planetary health.

Despite the range of resources available, it is up to health professionals as to whether they interact with planetary health related activities in any capacity. They are also not operated through the institution but by Te Whatu Ora itself or other related organisations, therefore a score of one has been given.

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

Yes, the **medical school** 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 medical centres have accessible educational materials for patients. (0 points)

Score Assigned:

Score explanation: The University of Auckland has ten different <u>clinical campuses/sites</u> across the North Island of New Zealand. Of these locations, few have resources available regarding sustainability. In fact, when looking online to see if resources exist, the results point primarily back to information available on the main Te Whatu Ora (Health New Zealand) website and the risks facing the whole country rather than any potentially unique environmental health risks faced by that particular region/community served by the hospital.

2

Regardless, the Te Whatu Ora website does provide information about a number of <u>environmental</u> <u>exposures</u> with pages titled: "*Climate change and environmental health*," "*Heat*," "*Drinking water*" and "*Sewage and grey water*" to name a few. The information on these pages is also presented in an easily understood manner, making it that much more accessible to those who are able to find it.

As these are online resources made by national organisations, they are available to anyone who has access to a device and internet. In a continually expanding digital age, this makes these accessible to the vast majority of patients who are able to read them at their leisure and follow any other associated links that these pages may point them to, growing their knowledge about health exposures. That being said, there are always those who do not have the means to access these sites and, in these scenarios, it is the duty of a healthcare professional to either print the resource and give a physical copy or explain to the patient the relevant health exposures. However, as these are technically available to patients of *all* hospitals/clinical sites associated with the University of Auckland, a score of two has been given.

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

Yes, the **medical school** 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:

Score explanation: While individual hospitals do not have specific resources, there are national initiatives to provide information to the general public in an understandable manner. One example of this is Healthify, which contains information about climate-change related health risks like climate change anxiety. The Ministry for the Environment, Manatū Mō Te Taiao, also published the page 'Climate change and our wellbeing' that provides information about climate change-related health effects like heatstroke, debilitating mental health, and food availability. Both of these resources are written for patients.

2

Along with this, Te Whatu Ora (Health New Zealand) released a report on their website from the Royal Society of New Zealand Te Aparangi titled <u>'Human Health Impacts of Climate Change for New Zealand'</u> that provides information on direct and indirect impacts this has, and benefits that can be gained from minimising the effects.

As with the resources about environmental health exposures, these are provided by national organisations and are thus available to patients of all hospitals associated with the University of Auckland. Access to these initiatives is also accessible from hospital websites which often <u>contain</u> a page of external links.

Of course, the degree to which someone is able to interact with them on their own is dependent on digital literacy and access to internet/devices, but this can be rectified if health professionals are willing to print or explain these health impacts to those who are unable to access them on their own. Due to this, a score of two has been given.

Section Total (10 out of 14)

71.43%

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your <u>institution</u> 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, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)

2

Score Assigned:

Score explanation: Students who are interested in conducting a sustainability initiative/QI project have the opportunity to do so through the Summer Research program at the University of Auckland. Should there be sustainability-related research projects available, or a student contacted the relevant supervisors with a potential project they were able to undertake during this time, they can apply to the program. Those who are successful are then eligible for a <u>Summer Research</u> <u>Scholarship</u>, providing them with a total of \$6,750 NZD given in fortnightly installments to help with living costs. As there is support given to students to encourage them to apply and carry out these projects, a score of two has been given.

4.2. Does your <u>institution</u> 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)

1

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

Score Assigned:

Score explanation: As in 2023, the University of Auckland provides research opportunities for students related to health/sustainable healthcare during the <u>summer break</u> or within university time. Although, to participate in these, students must reach out to the professor or the summer research programme first and be selected to participate. There is also the fact that there is no guarantee that sustainability-relevant projects will be promoted as it is dependent on staff offering such projects. As a result, a score of one is given.

4.3. Does the <u>institution</u> 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 medical school and/or contact of information of potential mentors.

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

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, 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)

1

Score Assigned:

Score explanation: The University of Auckland has a staff directory within which people can search via keywords or names and filter results accordingly. Through this, students are able to find staff or postgraduate students within their faculty who have similar research interests to them, and find out whether or not they are open to supervising a project. That being said, it does lack some key information such as which initiatives are already underway, how students can get involved, or what future projects are planned. Due to this, a score of zero has been given.

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 medical school 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:

Score explanation: The University of Auckland currently has a registered sustainability group, <u>Sustainable Future Collective</u>, operating on the main city campus but there are initiatives to open up a branch/club on the Grafton campus where healthcare degrees are taught. This expansion is supported by curriculum sustainability working groups and student advisors at the Grafton campus. Due to this, a score of two has been given as there is support for the current group and to establish the new branch by members of faculty but the setup has not yet occurred.

4.5. Is there a student liaison representing sustainability interests who serves on a <u>department</u> <u>or institutional</u> 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:

Score explanation: There are two student representatives who are part of the <u>Sustainability</u> <u>Management Board</u> which is tasked with improving sustainability at the University of Auckland. Therefore, a score of one has been given.

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)	
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<i>Score explanation:</i> There are a number of initiatives active at the University of Auckland that allow students to interact with the environment in a positive manner. Students are able to join different clubs or societies with sustainability or planetary health at the forefront, such as the Global Health	

Interest Group, Generation Zero UoA, and Sustainable Future Collective. The groups help to raise awareness of planetary health issues, bring together people from different faculties to discuss meaningful initiatives to improve sustainability at the University, and advocate for policy changes.

Students are also able to participate in events hosted by <u>UoA Volunteers</u> and include tree planting, upkeep of cycleways, and cleaning public areas like beaches or parks. At self-catered student accommodation, there are also communal gardens that students can utilise and help care for.

There are also wilderness and outdoor programs which may be offered by faculty or clubs. At the Faculty of Medical and Health Science, wellbeing walks are offered to pharmacy students which brings together students and staff and facilitates the fostering of friendships while giving an opportunity to appreciate the natural surroundings. Meanwhile, clubs that provide outdoor programs include the <u>Tramping Club</u> and the <u>Rock and Alpine Club</u>.

Section Total (10 out of 15)

66.66%

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?

Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)

There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)

There are **no salaried sustainability staff**, but there is a sustainability task force or committee. (1 point)

There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)

Score Assigned:

Score explanation: The University of Auckland has a <u>Sustainability Office</u> with a dedicated team of staff responsible for overseeing sustainability initiatives across the university. There are a number of <u>appointed committee members</u> including the Deputy Vice-Chancellor for strategic engagement, lead representatives, and student representatives. Moreover, in 2025, there are meetings scheduled to ensure appropriate staff engagement and the implementation of sustainability initiatives. However, there are no staff specifically allocated to the hospital or the Faculty of Medical and Health Sciences. Due to this, a score of two has been given.

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?		
The institution has a written and approved plan	to achieve carbon neutrality by 2030 (5 points)	
The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)		
The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)		
The institution/medical school does not meet any of the requirements listed above (0 points)		
Score Assigned:	5	

Score explanation: The University of Auckland has published a plan to achieve carbon neutrality by 2030 titled '<u>Te Taumata Tukuwaro-kore | Net Zero Carbon Strategy</u>' which outlines how this will be achieved. Within this document there is also published information of the institution's emissions, the source of these emissions, current trends, priorities to help reduce emissions, and how the goal of Net Zero will be achieved. Due to this, a score of five has been given.

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:

Score explanation: The University of Auckland's buildings utilise 100% renewable energy as of October 2024, with energy sourced from Toitū carbonzero certified suppliers. Therefore, a score of three has been given.

3

Information about the University of Auckland's energy consumption can be found on the page <u>Saving Energy</u>.

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u> 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:

Score explanation: The University of Auckland's <u>Sustainable Design Guidelines</u> were published in 2024 and set clear requirements of new building projects or refurbishments being undertaken across the various campuses. This guideline includes meeting various green accreditation standards,

incorporating sustainable transport/commute plans, using renewable sources of energy, prioritising sustainable materials, and minimising waste production. For older buildings, the University prioritised retrofitting and remodelling initiatives to follow sustainable design guidelines, such as reusing existing structures to minimise environmental impact. However, this is not done to all old buildings, therefore a score of two has been given.

5.5. Has the <u>institution</u> 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)

1

Score Assigned:

Score explanation: Over the last six years, the University of Auckland has strived to foster <u>sustainable commuting</u> by creating more secure parking for individuals commuting via bike or scooter. As of 2024, nine communal bike stores are available for use by staff and students, along with additional facilities at University-owned accommodation for students living there. Where appropriate, showers, lockers, and drying rooms have been retrofitted to make these forms of active transportation more appealing to students.

Part of the <u>Sustainability Policy</u> also notes a commitment to further promotion of sustainable transportation including walking, public transport, and electric vehicles. However, these are still proposed strategies and are yet to be implemented or advertised to students. Due to this, a score of one has been given.

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 medical school. (0 points)

Score Assigned:

Score explanation: At the University of Auckland there are general rubbish, paper, and can recycling bins provided across campus. As well as this, all commercial kitchens operating on the various campuses are required to separate all pre and post-consumer food waste for <u>composting</u>. Similar initiatives have been implemented in staff kitchens and, in the Faculty of Science, within the postgraduate kitchen spaces too. As both of these services are available, a score of two has been given.

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

Yes, the institution has a**dequate** 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)

2

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

Score Assigned:

Score explanation: The University of Auckland recognises that sustainability in food and beverage selection is important but has limited plans laid out to ensure that all providers are following sustainable practices. As part of the <u>Sustainable Events Guide</u> there are tips for minimising food waste, such as having caterers take responsibility for collection of food scraps or offering a pre-order menu. However, following these guidelines is only encouraged rather than enforced. There is also no information on the responsibility of internal food providers located on campus to source their ingredients sustainably. The only information provided about these retailers is the dietary requirements they are able to cater to which is found on the the page 'Food and drink on <u>campus</u>' which lists all retailers and their locations. However, there is no information about whether or not these retailers are encouraged to promote sustainable eating practices, such as reduced meat consumption. Considering all of this, a score of two is justified.

5.8. Does the <u>institution</u> 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
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Score explanation: The University of Auckland's <u>Sustainability Policy</u> aims to improve environmental performance and extends to include suppliers. This means, as part of the policy, suppliers are expected to minimise any negative impact on land, freshwater, or marine environments as part of their operations. The <u>Procurement Policy</u> also states that environmental impacts should be taken into consideration regarding how the products are made and how they will be transported to the University. Therefore, while there are guidelines that do recommend sustainable sourcing, they are brief and not enforced by the University, thus a score of one has been given.

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:

Score explanation: Yes, the University of Auckland has a <u>Sustainable Events Guide</u>. This provides information to organisers about how to ensure that their events align with the University's Net Zero Strategy. As well as this, there is a checklist at the end of the page that can be used to help people assess whether or not they have done enough to ensure minimal harmful impact on the environment. However, there is no information as to whether usage of this guide is compulsory in event planning or simply available for those who are interested, thus a score of one has been given.

1

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:

Score explanation: Initiatives have been implemented by various faculties at the University of Auckland to improve sustainability of lab spaces. In the Faculty of Science, lab managers have formed the <u>Science Sustainability Network</u> which aims to reduce waste production, energy use, and water use during lab sessions. There is also an aim to educate users of these lab spaces about how to implement more sustainable practices and have created a means to assist with sustainability criteria in lab audits.

Furthermore, the School of Pharmacy has recently received MyGreenLab accreditation, the gold-standard for sustainable laboratory practices, showing further commitment to achieving sustainability in labs. Due to this, a score of two has been given.

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)

3

Score Assigned:

Score explanation: The University of Auckland follows a responsible investment policy and, as part of a <u>Donor Report</u>, explicitly mentioned that "The Foundation will not invest in funds that invest in companies that derive any revenue from fossil fuel reserves…" and the remaining 0.0075% of investments in fossil fuels – noted in the 2023 Report Card – have also been eliminated. However, while the University transitioned to 100% renewable energy sources in October of 2024, there is no information as to whether there is investment by the University in these sectors. Therefore, a score of three has been given.

Section Total (24 out of 32)

75.00%

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Grading

Section Overview

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

Letter Grade*	Percentage	
А	80% - 100%	
В	60% - 79%	
С	40% - 59%	
D	20% - 39%	
F	0% - 19%	

*Within each grade bracket, a score in the top 5% ($_5$ to $_9$ %), receives a "+", and a score in the bottom 5% ($_0$ - 4%) receives a "--". For example, a percentage score of 78% would be a B+.

Planetary Health Grades for the University of Auckland School of Pharmacy

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(30/66) \ge 100 = 45.45\%$	С
Interdisciplinary Research (17.5%)	(10/17) x 100 = 58.82%	C+
Community Outreach and Advocacy (17.5%)	(10/14) x 100 = 71.43%	В
Support for Student-led Planetary Health Initiatives (17.5%)	(10/15) x 100= 66.67%	В
Campus Sustainability (17.5%)	(24/32) x 100 = 75.00%	B+
Institutional Grade	(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 61.22%	В-

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which the University of Auckland School of Pharmacy has participated in the Planetary Health Report Card initiative.



