Planetary Health Report Card (Medicine):

Institute of Medical Sciences and SUM Hospital, Bhubaneswar

2024-2025 Contributing Team:

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Summary of Findings

Overall Grade	B-

Curriculum	A

- IMS and SUM Hospital effectively integrate planetary health into its curriculum, through planned lectures, debates, and community outreach programs. Students gain a solid understanding of planetary health by extensively addressing fundamental topics like environmental health, sustainable healthcare practices, and health challenges related to climate change.
- **Recommendations-** Enhance advanced Practical Training among undergraduates by providing more chances for in-depth experiential learning through projects, workshops, and clinical practice in healthcare that is focused on sustainability.

Interdisciplinary Research	C

- IMS and SUM Hospital conduct research on air pollution, infectious diseases, and environmental toxins through Community Medicine, Biochemistry, Microbiology, and Public Health. They emphasize sustainability and community involvement in research priorities. They host many conferences on planetary health.
- **Recommendation**s- Need of a dedicated research institute, centralized website, and membership in relevant national or international organizations.

Community Outreach and Advocacy	B-

- IMS and SUM Hospital collaborate with community organizations and host health camps. While some events and Continuing Medical Education (CME) sessions touch on planetary health, structured educational programs are lacking. Patient education resources on environmental health exist, but materials specifically addressing climate change impacts are limited.
- **Recommendations-** 1. Enhance partnerships- with organizations focused on environmental health.
  2. Develop structured educational programs on planetary health.
  3. Incorporate sustainability themes in university communications.

Support for Student-Led Initiatives	C

- IMS and SUM Hospital support student-led sustainability initiatives through research opportunities, mentorship, and community programs, despite limited financial resources. A dedicated web page provides some project and mentor information but lacks essential details. The institution hosts panels on planetary health and educational sessions on environmental justice but lacks programs for organic agriculture and outdoor sustainability.
- **Recommendations:** 1. Enhance the sustainability webpage with more project details and mentor contacts.
  2. Appoint a student sustainability representative in institutional councils.

Campus Sustainability	D

- IMS and SUM Hospital have made preliminary advancements in sustainability, particularly in waste management. Nonetheless, there is an absence of a comprehensive carbon neutrality strategy, a designated Office of Sustainability, and established protocols for procurement, events, and food services. The sustainability initiatives in laboratories are praiseworthy.
- **Recommendations**- The institution should have a carbon neutrality goal, which is inadequate, Sustainable building practices are inadequate, the institution has investments with fossil-fuel companies and there should be efforts to change that.

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 Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:

    1. Describe how the environment and human health interact at different levels.
    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
    3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

- **Medical School/Department vs. Institution:** When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric 19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a 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

- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

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

Completed in 2022 a Literature Review by Metric is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

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

Curriculum: General

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

Score explanation: Yes, IMS and SUM Hospital have incorporated Education for Sustainable Healthcare (ESH) and Planetary Health into elective learning opportunities for students.

1. Public Health & Environmental Medicine Elective: Offered by the Department of Community Medicine which covers climate change-related health risks, air and water pollution, and their impact on communicable and non-communicable diseases. It also includes field visits to rural and urban areas to assess environmental determinants of health.
2. Biomedical Waste Management & Green Hospital Practices: By the Department of Hospital Administration & Microbiology. It focuses on proper biomedical waste disposal, hospital sustainability practices, eco-friendly medical innovations, Hands-on training in waste segregation, infection control, and eco-conscious healthcare facility management.
3. One Health Approach & Zoonotic Diseases: Offered as part of the Microbiology and Pathology departments. It explores the connection between human, animal, and environmental health, and covers the impact of deforestation, climate change, and industrialization on emerging zoonotic diseases.
4. Nutrition & Sustainable Diets for Preventive Medicine: Conducted by the Department of Physiology & Nutrition. It teaches the impact of food production on climate change and the role of plant-based diets in sustainable healthcare.

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: Yes, IMS and SUM Hospital addresses the relationship between extreme heat, health risks, and climate change as part of its medical curriculum. 1. Community Medicine & Public Health: Lectures on the impact of extreme heat on vulnerable populations. Students assess heat-related illnesses in rural and urban settings during community health field training postings. 2. Physiology & Pathophysiology of Heat-Related Illnesses: Thermoregulation, heat exhaustion, and heat stroke mechanisms. Also diagnosis and clinical management of hyperthermia, electrolyte imbalances, and dehydration in hospitals. 3. Emergency Medicine & Disaster Preparedness: Training in handling heat stroke cases, dehydration management, and emergency response in OPDs and emergency units. 4. Forensic Medicine: Thermal injuries such as heat stroke, hyperpyrexia, heat exhaustion, heat synapse, etc.	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: Yes, IMS and SUM Hospital incorporate the study of extreme weather events and their effects on individual health and healthcare systems into its medical curriculum, clinical training, and public health programs. 1. Community Medicine & Public Health: Lectures on the topic Disaster Management and effects of cyclones, floods, heatwaves, and air pollution on public health. Vector-borne diseases (dengue, malaria, leptospirosis) due to changing climate patterns. 2. Emergency Medicine & Disaster Preparedness: Disaster Response Training and collaboration with Disaster Relief Teams.	

3. Internal Medicine & Infectious Diseases: Impact of extreme weather events on disease outbreaks (cholera, typhoid, respiratory illnesses).

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation: Yes.

1. Microbiology & Infectious Diseases: Lectures on how rising temperatures and humidity are expanding the geographic distribution of vector-borne diseases and how flooding and extreme weather events increase outbreaks of waterborne diseases. Studying vector adaptation and antimicrobial resistance (AMR) influenced by climate factors.
2. Community Medicine & Public Health: Field Training & Surveillance Studies on epidemiological mapping of climate-sensitive infectious diseases in Odisha. Case Studies on the Impact of Cyclone Fani & Yaas on infectious disease patterns in Odisha.
3. Internal Medicine & Respiratory Health: Infectious respiratory diseases (TB, COVID-19, influenza) and Fungal infections and how climate-driven air pollution worsens disease severity.

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3

Score explanation: Yes.

1. Pulmonology & Respiratory Medicine: Lecture modules on Air pollution-related respiratory diseases (asthma, COPD, lung cancer), Impact of rising temperatures, pollen levels, and wildfires on respiratory health, Role of particulate matter (PM2.5, PM10), NO2, SO2, and ground-level ozone in lung diseases, etc.
2. Community Medicine & Public Health:

- Field Studies on Air quality monitoring and correlation with respiratory health statistics in urban & rural Odisha, Assessing the impact of crop burning and industrial emissions on respiratory illnesses.
- Public Awareness Programs such as clean air campaigns and anti-smoking drives.
- Educating communities on protective measures (masks, air purifiers, indoor plants, and ventilation strategies).

3. Internal Medicine & Occupational Health: Respiratory effects of indoor air pollution, biomass fuel burning, and occupational dust exposure.

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation: Yes, the institution includes the study of cardiovascular health impacts due to climate change, especially increased heat exposure, into its medical curriculum, clinical training, and research programs.

1. Cardiology & Internal Medicine: Lecture Modules on Heat stress and its impact on cardiovascular health (heatstroke, dehydration-induced hypotension, arrhythmias), Air pollution and cardiovascular diseases (hypertension, atherosclerosis, stroke, myocardial infarction), Impact of extreme temperatures on blood pressure regulation and heart function. ECG and echocardiography training for detecting heat-induced cardiac dysfunction.
2. Emergency Medicine & Critical Care: Acute management of heat-related cardiac emergencies and simulation based training.
3. Community Medicine & Public Health: Epidemiological Studies on Assessing heatwave-related mortality and cardiovascular disease prevalence in Odisha, and Investigating urban heat islands and their effect on hypertension and stroke cases. They also organise awareness programs and community outreach programs.

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?
This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.
This topic was covered in **elective** coursework.
This topic was **not** covered.

Score Assigned:	3

Score explanation: Yes.

1. Psychiatry & Behavioral Sciences: Lecture Modules on
    - Eco-anxiety, climate grief, and solastalgia (distress due to environmental loss).
    - Psychological trauma from extreme weather events (floods, cyclones, displacement).
    - Air pollution and its link to neurodevelopmental disorders, depression, and dementia.
    - Diagnosis and management of climate-related anxiety and PTSD in disaster-affected patients.
    - Training in cognitive behavioral therapy (CBT) for eco-anxiety and stress disorders.
2. Neurology & Neurosciences:
    - Impact of heavy metals, pesticides, and air pollution on cognitive decline, Alzheimer's, and Parkinson's.
    - Research on increased stroke risk due to rising temperatures.

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

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:	2

Score explanation: Yes, IMS and SUM Hospital incorporate the study of food and water security, ecosystem health, and climate change into its medical curriculum, clinical training, public health initiatives, and research programs.

1. Community Medicine & Public Health: Lecture Modules on
    - Impact of climate change on food and water security in India and Odisha.
    - Nutritional deficiencies due to agricultural disruptions (e.g., protein-energy malnutrition, micronutrient deficiencies).
    - Waterborne diseases due to climate change
2. Nutrition & Dietetics:
    - Understanding crop failures and their impact on dietary patterns.
    - Addressing climate-induced shifts in food availability and their health consequences (e.g., vitamin A deficiency, anemia).
    - Promoting plant-based and climate-friendly nutrition strategies.

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?

This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.
This topic was covered in **elective** coursework.
This topic was **not** covered.

Score Assigned:	3

Score explanation: Yes.

1. Community Medicine: Lectures were held for the students on these topics such as Women's health and the effects of climate change on maternal and reproductive health, Children's vulnerability to climate-driven malnutrition and infectious diseases. Field Work & Rural Health Exposure such as working with tribal communities in Odisha to assess climate-related health risks.
2. More lectures and clinical postings have been held focusing on these subjects in various departments of the hospital.

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

This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.
This topic was covered in **elective** coursework.
This topic was **not** covered.

Score Assigned:	2

Score explanation: Yes.

1. Community Medicine & Public Health:
    - Desertification and Malnutrition in Sub-Saharan Africa
    - Cyclones and Flooding in South Asia (including Odisha)
    - Heat Waves and Wildfires in Australia and North America
2. Infectious Diseases & Epidemiology: Changing Patterns of Disease:
    - Expansion of malaria, dengue, and chikungunya due to global warming.
    - Zoonotic spillover (e.g., Nipah, Ebola) from deforestation and habitat loss.
    - Antimicrobial resistance in climate-stressed regions.
3. Environmental Health & Occupational Medicine:
    - Severe air pollution in South Asia (India, China) vs. Europe.
    - Wildfire smoke exposure in California vs. Amazon rainforest.

1.11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: In the first-year course at IMS & SUM Hospital, lectures under Genetics and Molecular Biology introduced various cancers, also the same was discussed in physiology. Further in the second-year, in Pathology under the Neoplasia chapter various aspects of this topic are discussed. In Forensic Medicine and Toxicology ,topics like cadmium, mercury, and lead were covered in the context of lifestyle and occupational disorders, with a focus on how such toxins affect fertility and pregnancy.Specific effects were also dealt with in subjects of community medicine.	

1.12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: The course at IMS & SUM Hospital comprehensively addresses environmental threats caused by human activities that are pertinent to the local community. Within the Community Medicine segment under various competencies it encompasses issues such as air, water, noise pollution, and radiation emphasizing their effects on health. Safe water, sanitation, and the prevention of waterborne diseases are included .Solid waste and sewage management are also taught about. The family adoption initiative encourages students to engage with the community, promoting access to clean water and disease prevention efforts. During the second and third years, students explore environmental threats in the 'Environment and Health' section, with disaster management covering man-made disasters	

associated with global warming. The Occupational Health chapter examines diseases such as asbestosis and lead poisoning, alongside discussions on food adulteration and its impact on the community. This thorough approach prepares students to effectively confront local environmental health issues.

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation:

At IMS and SUM Hospital, the curriculum integrates indigenous knowledge and value systems as part of planetary health solutions. Students are encouraged to practice yoga from the first year, promoting holistic well-being. The use of natural, plant-based substances like opioids, quinine, and clove is introduced, highlighting their therapeutic benefits and environmental impact.

Community Medicine emphasizes socio-cultural and demographic factors in health, including traditional healing practices. The Integrated Management of Neonatal and Childhood Illness (IMNCI) module promotes home remedies like ginger, black pepper, honey, and basil for minor ailments. While Ayurveda and AYUSH are not part of the core allopathic curriculum, their eco-friendly approaches align with sustainable healthcare practices.

By incorporating yoga, home remedies, and socio-cultural perspectives, IMS and SUM Hospital recognize the role of indigenous knowledge in planetary health.

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?
This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation:

At IMS and SUM Hospital, the Community Medicine curriculum emphasizes the impact of environmental factors on health, particularly in lower socio-economic groups. The Environment and Health chapter covers toxins and pollution-related diseases like silicosis, asbestosis, and tuberculosis. Additionally, the Family Adoption Programme allows students to engage with underprivileged families, addressing their healthcare needs over five years.

IMS and SUM Hospital's blend of theoretical learning and hands-on community engagement ensures students understand and address environmental health disparities effectively.

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3

Score explanation:

Yes, the curriculum at IMS and SUM Hospital addresses the environmental and health co-benefits of a plant-based diet. In Community Medicine, the Nutrition and Health module explores the glycemic index of foods, dietary fiber, and their role in preventing diseases like diabetes. Lectures also discuss the impact of plant-based diets in reducing the risk of colon cancer and promoting longevity.

Additionally, the curriculum highlights the environmental benefits of plant-based nutrition, including lower greenhouse gas emissions and the sustainability of indigenous crop cultivation. By integrating these discussions, IMS and SUM Hospital ensure that students understand the vital link between diet, health, and environmental sustainability.

1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: IMS and SUM Hospital actively includes the examination of carbon emissions related to healthcare within its educational framework. Community Medicine & Public Health: Instruction on sustainable healthcare practices, hospital emissions, and strategies for waste reduction. Hospital Administration & Policy: Emphasis on energy efficiency, effective waste management, and the implementation of digital record-keeping. Clinical Training: Focus on low-carbon anesthesia techniques, optimized laboratory testing, and sustainable medical practices. Research & Student Projects: Investigations aimed at minimizing emissions in intensive care units and operating theaters, alongside initiatives for green healthcare. IMS and SUM Hospital is providing sustainability within both medical education and hospital operations.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing	1

less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
Waste production within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1

Score explanation:

1. Avoiding over-medicalisation & over-treatment (2 pts) – Taught by Medicine, Radiology, and Pharmacology to promote rational prescribing and reduce unnecessary investigations.
2. Environmental impact of pharmaceuticals & over-prescribing (2 pts) – Covered in Pharmacology, Community Medicine, and Microbiology with a focus on deprescribing, antimicrobial stewardship, and safe disposal.
3. Non-pharmaceutical management (1 pt) – Endocrinology, Psychiatry, and Physiotherapy emphasize lifestyle changes, yoga, and social prescribing.
4. Sustainable surgery (1 pt) – Surgery & Hospital Administration focus on reusable instruments, waste segregation, and energy-efficient practices.
5. Anaesthetic gases & carbon footprint (1 pt) – Anesthesiology trains students on low-impact gases and total intravenous anaesthesia.
6. Eco-friendly inhalers (1 pt) – Pulmonary Medicine promotes dry powdered inhalers over metered-dose inhalers.
7. Healthcare waste reduction (1 pt) – Hospital Administration, Microbiology, and Nursing enforce biomedical waste management and reduce single-use plastics. The information has been collected from the https://sum.soa.ac.in/about-sum.

Curriculum: Clinical Applications

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

Score explanation:
IMS and SUM Hospital provide training for students to engage patients in discussions about the health implications of climate change through the following methods:
Community Medicine & Public Health: Instruction on counseling techniques for managing heat-related illnesses, vector-borne diseases, and the impacts of air pollution.

Clinical Training: Interactive case discussions focused on advising at-risk populations, including children, the elderly, and individuals with respiratory conditions, regarding climate-related health threats.
Outreach Programs: Initiatives such as medical camps and awareness campaigns that tackle climate-related health issues within local communities.
Through these efforts, IMS and SUM Hospital prepare future healthcare providers to support patients in adopting climate-resilient healthcare practices.

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)	
Only **elective** coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2
Score explanation: The students receive training in Community Medicine that emphasizes the systematic investigation of environmental exposures, such as air pollution, water contamination, occupational hazards, pesticide exposure, and housing conditions. Through clinical case discussions and Objective Structured Clinical Examinations (OSCE), students cultivate the ability to recognize diseases associated with environmental factors, including asthma, heavy metal toxicity, and occupational lung diseases. Moreover, outreach initiatives and hospital-based screenings enhance the practical application of this knowledge. This approach guarantees that future healthcare professionals at IMS and SUM Hospital are well-equipped to evaluate and manage environmental risk factors that impact patient health.	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)	
No, there are **no** improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
Score explanation: **Curriculum Development:** Expanding topics on climate change, environmental health, and sustainable healthcare practices in **Community Medicine, Internal Medicine, and Public Health**.	

Clinical Training: Teaching students to take **environmental exposure histories** and counsel patients on climate-related health risks.
Research & Initiatives: Encouraging student-led projects on **sustainable hospital practices and planetary health**.
Hospital Policies: Implementing **green hospital initiatives** like energy efficiency, waste reduction, and eco-friendly procurement.
Seminars and online meetings regarding the same have also been conducted.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	6

Score explanation:
Few examples include

Pre-Clinical Phase (1st & 2nd Year)

Anatomy *– Impact of environmental toxins (e.g., heavy metals, air pollution) on organ development.****Physiology*** *– Effects of extreme temperatures on homeostasis and adaptation mechanisms.****Biochemistry*** *– Role of oxidative stress due to pollution and its link to metabolic diseases.****Pharmacology*** *– Eco-friendly drug disposal and antimicrobial resistance due to environmental factors.*

Para-Clinical Phase (3rd Year Part 1)***Forensic Medicine & Toxicology*** *– Environmental toxins, industrial hazards, and legal regulations on pollution.****Community Medicine*** *– Climate change and public health, sustainable healthcare, planetary health advocacy.*

Clinical Phase (3rd Year Part 2 & Internship)***Pediatrics*** *– Climate-sensitive diseases in children (malnutrition, infectious diseases, environmental allergies).****Obstetrics & Gynecology*** *– Impact of environmental pollutants on pregnancy outcomes.*

IMS and SUM Hospital ensures that future doctors receive ***comprehensive training on planetary health****, making them capable of integrating sustainability into clinical practice .*

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	0
Score explanation: **No**, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.	

Section Total (66 out of 72)	**91%**

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Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	2
Score explanation: Faculty members from **Community Medicine, Environmental Health, Biochemistry, and Microbiology** are engaged in research on **air pollution-related diseases, climate change and infectious diseases, antimicrobial resistance, and the health effects of environmental toxins.**	

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:	2

Score explanation:
The Department of Community Medicine, the Department of Environmental Health, and the Department of Public Health have initiated the integration of climate change and sustainability themes into their research endeavors. Furthermore, faculty members from the Departments of Biochemistry, Microbiology, and Internal Medicine are investigating the effects of pollution, infectious diseases, and non-communicable diseases associated with environmental influences. Although a formal institute has not yet been established, IMS and SUM Hospital are diligently pursuing the development of collaborative research focused on planetary health and sustainable healthcare solutions.

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:	1

Score explanation:
At IMS and SUM Hospital, efforts are being initiated to involve communities disproportionately affected by climate change and environmental injustice in shaping research priorities.
The Department of Community Medicine has started engaging with local populations through health surveys and outreach programs to understand environmental health concerns like heat stress, water contamination, and vector-borne diseases.

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:	0

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
Score explanation: World Heart Day in 2024 Biomedical Waste Management Day in 2024 DESIGNING OF EXPERIMENTS IN VETERINARY AND ANIMAL SCIENCE 2025 https://drive.google.com/file/d/1X_NtfCphzjCPos1ZBZGAaQXF5OSqvjm7 World Environment Day 2024, 2023, 2022 International day for Climate Action 2024	

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

Section Total (9 out of 17)	**52.94%**

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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)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3
Score explanation: The institution actively engages with community organizations like NMO, NSS, Lion's club, Rotary and Youth for Seva to promote planetary along with public health initiatives. The Department of Community Medicine organises plantation drives, health camps, awareness programs, and training sessions which helps in providing awareness about planetary and environmental health in rural areas and urban slums.	

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: These community-facing courses or events about planetary health may not necessarily be packaged as formal courses for public consumption. However, the institution has engaged in awareness programs about health, outreach to communities, and environmental activities such as participating in the NMO plantation drive. Moreover, hospitals also run public health awareness programs on topics such as diabetes, thyroid disease, nutrition, and prevention of infectious diseases. Such events help increase health literacy and are consistent with the belief that public education on health risks are good for getting better results.	

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are **sometimes** included in communication updates. (1 point)	
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: IMS and SUM Hospital does not have a dedicated section in its university update communications that regularly covers planetary health or sustainable healthcare. While the institution is actively involved in healthcare education, research, and community outreach, environmental sustainability and planetary health are not featured in routine university updates. However, the institution has participated in green initiatives and in public health awareness programs that indirectly contribute to sustainability by promoting preventive healthcare and reducing the burden of disease.	

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:	0
Score explanation: There are no such accessible courses for post-graduate providers.	

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: Yes, there are many educational materials for patients on environmental health exposures. The Community Medicine Dept. conducts rural health outreach programs where topics like safe pesticide use, industrial pollution and water contamination are discussed with the people. The Department of Pulmonary Medicine provides educational materials and counselling on air pollution- related respiratory diseases. During the peak summer season, UG students enacted a drama on 'First Aid for Heat Stroke' in the middle of the hospital lobby, ensuring that everyone coming to the hospital could watch and learn.	

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 **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	1
Score explanation: There are many posters and pamphlets on the walls of various departments in the hospital regarding climate change and health. However, IMS and SUM Hospital do not have any articles or online resources on their website dedicated to the health impacts of climate change.	

Section Total (9 out of 14)	**64.28%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
Score explanation: IMS and SUM Hospital supports student-led sustainability initiatives and QI projects through research opportunities, faculty mentorship, community programs, and environmental campaigns. Interested students can work under the guidance of a mentor and after completion the research paper has to be verified by the Ethics Committee. Then the student can apply for extramural funding if needed.	

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:	1
Score explanation: IMS and SUM Hospital offer cross departmental research opportunities in planetary health and sustainable healthcare practices. Students can participate in multidisciplinary clinical, laboratory, and community-based research in the areas of environmental health, pollution	

and disease, and sustainable medicine. However, these require student initiative to seek these out and carry them out in their spare time.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the 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)	
Score Assigned:	1
Score explanation: Yes, the institution has a webpage- https://www.ims.ac.in/research, where students can find some information about the details of project proposals and mentors on sustainable healthcare. But it lacks key information. Extramural projects and IEC details are also given in this.	

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
Yes, there is a student organisation **with faculty support** at my medical school 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:	0
Score explanation: No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare. However we have faculty-supported student groups actively engaged in planetary health advocacy, research, and outreach.	

4.5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	0
Score explanation: No, there is no such student representative.	

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.	0
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

Score explanation:

1. Panels, Speaker Series, & Seminars on Planetary Health:

- The Department of Community Medicine organized guest lectures and awareness sessions on:
  - The impact of air pollution and climate change on public health.
  - Strategies for sustainable healthcare and hospital waste management.
- Students have attended expert sessions by public health professionals and environmental scientists.

2. Learning from Environmental Justice Communities:

- Interactive field visits were conducted by the Community Medicine Department.
- They also conduct the “Family Adoption Program” starting from the 1st year mbbs, in which the students visit many families in the slum area, learning more about how health professionals can partner with the community to address about air pollution, climate

change- related health risks, contaminated water sources and ways to purify water for household purposes.

3. Cultural Arts Events, Installations, or Performances:
As part of World Environment Day celebrations, students organized:

- Poster exhibitions on climate change and health impacts.
- Street plays and short film screenings on environmental sustainability and pollution-related diseases.

4. Local Volunteer Opportunities for Community Resilience:
Students participated in:

- Tree plantation drives (NMO Initiative) to combat urban heat and pollution.
- Medical outreach programs in rural areas, educating communities about the effects of environmental pollution on health.

.5 Awareness Marathons

- Organised various marathons and awareness programs, ex- World Diabetes Day marathon 2024

Section Total (8 out of 15)	**53.33%**

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	1
Score explanation: The Institution does not have an Office of Sustainability and no salaried sustainability staff, but there is a sustainability committee. 'Hospital Waste Management System' by Department of Hospital Administration & Microbiology. 'Energy-Efficient Practices' and 'Water Conservation & Sustainable Sanitation' by Hospital Infrastructure Management and Department of Public Health.	

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/medical school does **not** meet any of the requirements listed above (0 points)	
Score Assigned:	0

Score explanation: IMS and SUM Hospital does not have a comprehensive carbon reduction strategy, but it has implemented some sustainable practices to minimize its environmental impact.

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes, institution buildings are **100%** powered by renewable energy. (3 points)	
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
Score explanation: IMS and SUM Hospital's academic buildings do not currently rely significantly on renewable energy. However, there have been some steps toward energy efficiency and limited renewable energy adoption like LED Lighting & Energy-Efficient Fixtures and Partial Solar Energy Use.	

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:	1
Score explanation: Some sustainable building practices have been incorporated into new constructions and renovations but not completely. Old buildings have not been retrofitted.	

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:	1
Score explanation: IMS and SUM Hospital has implemented some environmentally-friendly transportation strategies such as **Campus Shuttle Buses-** reducing the number of individual vehicles on road, **On-Campus Hostels** for students and **Flats** for staff- reducing daily commuting emissions, Encouraging **shared transportation**, **Pedestrian friendly pathways** for cycling and walking.	

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the medical school. (0 points)	
Score Assigned:	1
Score explanation: The institution has a conventional recycling program for managing medical and non-medical waste, but an organics recycling (composting) program is not fully implemented.	

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	1
Score explanation: IMS and SUM Hospital has some sustainable food practices, such as locally sourced ingredients and partial plastic reduction, but no structured sustainability criteria for food procurement.	

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:	2
Score explanation: IMS and SUM Hospital has some sustainable procurement practices, especially in medical supply management and waste reduction, but no formal sustainability policy governs all procurement decisions. Sustainable practices such as Eco-friendly Medical Waste Management, Bulk procurement to reduce packaging waste, energy efficient equipment procurement.	

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution **must** abide by sustainability criteria. (2 points)	
The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)	
There are **no** sustainability guidelines for institution events. (0 points)	
Score Assigned:	1
Score explanation: The institution does not have a formal sustainability policy for events, but some eco-friendly practices have been implemented in various campus events.	

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
Score explanation: IMS and SUM Hospital is committed to environmentally sustainable laboratory practices by implementing waste reduction, energy-efficient technologies, and responsible resource management in its research and diagnostic labs. ● **Comprehensive Biomedical Waste Management:** - Using color-coded bins. - Follows Biomedical Waste Management Rules, 2016, ensuring proper disposal of lab waste. ● **Energy-Efficient Equipment & Resource Conservation:** - Labs use energy-efficient centrifuges, PCR machines, and incubators. - LED lighting and automated power-saving modes in lab instruments. ● **Minimization of Chemical Waste:** - Use of micro-volume assays and minimal reagent usage - Ethanol recycling and controlled disposal of hazardous chemicals in research labs. ● **Autoclaving & Reusable Glassware:** - Labs use glass pipettes and reusable labware instead of single-use plastics. ● **Environmentally Conscious Lab Infrastructure:** - Well-ventilated lab spaces - Regular maintenance of freezers, incubators, and fume hoods.	

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	0

Score explanation: There is no publicly available information regarding whether IMS and SUM Hospital's endowment portfolio includes investments in fossil fuel companies.

Section Total (11 out of 32)	**34.37%**

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Grading

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

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

**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 IMS AND SUM Hospital
The following table presents the individual section grades and overall institutional grade for the IMS AND SUM Hospital on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(66/72) x 100 = 91.66%	A
Interdisciplinary Research (17.5%)	(9/17) x 100 = 52.94%	C
Community Outreach and Advocacy (17.5%)	(9/14) x 100 = 64.28%	B-
Support for Student-led Planetary Health Initiatives (17.5%)	(8/15) x 100= 53.33%	C
Campus Sustainability (17.5%)	(11/32) x 100 = 34.37%	D
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 63.35%**	**B-**