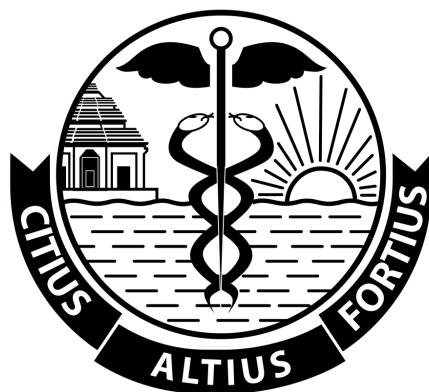




Planetary Health Report Card (Medicine): *Srirama Chandra Bhanja Medical College and Hospital (Utkal University)*



S.C.B. MEDICAL COLLEGE

2023-2024 Contributing Team:

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Summary of Findings

Overall	C
<u>Curriculum</u>	A-
<ul style="list-style-type: none"> SCBMCH has taken notable steps to integrate planetary health longitudinally into the curriculum. Across the first three years, various aspects of planetary health are discussed in different lectures. However, there is no dedicated discussion of planetary health or carbon footprint in the seminars or tutorials. Recommendations: A separate coursework or module discussing planetary health and the different health impacts of climate change would be helpful. The usage of flashcards, or other suitable means of communication, highlighting the locally relevant health effects of climate change to encourage dialogue with patients is imperative. 	
<u>Interdisciplinary Research</u>	C
<ul style="list-style-type: none"> Although SCBMCH has an ethics committee and a newly assembled Multidisciplinary Research Unit (MRU), it mainly focuses on clinical research topics with a clinical impact. There is limited publicly available data on conferences and past/present research under the banner of planetary health. Recommendations: SCBMCH should form a committee dedicated to planetary health and sustainable development research in collaboration with Utkal University's Centre for Environment, Climate Change & Public Health. Setting up a website dedicated to planetary health updates and news is essential. 	
<u>Community Outreach and Advocacy</u>	D-
<ul style="list-style-type: none"> Campaigns and activities organised by our medical school involve the community but are mostly concerned with clinical knowledge and awareness. Hospitals do not have any accessible educational materials for patients to advocate planetary health. Recommendations: SCBMCH should form a planetary health committee with a student representative dedicated to organising outreach activities in schools and other colleges and communities/slums/dwellings to promote awareness and education on the health impacts of climate change. 	
<u>Support for Student-Led Initiatives</u>	C
<ul style="list-style-type: none"> SCBMCH supports student-driven activities but there have not been many initiatives related to planetary health. The lack of both a dedicated research group and proper supervision/encouragement at the undergraduate level in medical school makes it difficult to carry out QIPs or research related to planetary health. Recommendations: The medical school should first inculcate awareness, and further support students interested in working in the field of planetary health by providing a platform to network with faculties/other researchers from different disciplines having similar interests. 	
<u>Campus Sustainability</u>	D-
<ul style="list-style-type: none"> SCBMCH has made a good start towards becoming a more sustainable campus in terms of using sustainable building materials as well as energy optimisation. Water management systems have demonstrated a reduction of 28.9% according to the Green Rating for Integrated Habitat Assessment. However, there is a long way to go to become a carbon-neutral campus. Recommendations: The SCBMCH campus should have a net zero carbon goal. To reduce the carbon footprint and promote good health, a clean campus and active travel such as walking and the use of bicycles should be encouraged. 	

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more

broadly. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

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

Other considerations:

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: SCBMCH offers a 30-day research-based elective to 4th-year medical students but planetary health is not the primary focus of the elective.</i></p>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: In the academic year 2023-24 the effect of extreme heat and pollution on the human body, especially associated health risks like heat stroke, were extensively discussed under CM (Community Medicine) 3.1 competency given in competency-based undergraduate curriculum issued by National Medical Commission (NMC). Furthermore, as a part of the third-year core curriculum at SCBMCH, the Community Medicine lecture titled 'Heat and its effect' under the unit 'Environment' features a discussion on heat and its health hazards including heatstroke, heat cramps, heat exhaustion,</i></p>	

hyperthermia and others. Forensic Medicine and Toxicology also briefly deals with heat and its effects under the header of “Thermal Injuries” as per FM 2.24 competency of NMC.

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

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

Score explanation: A lecture on disaster management in Community Medicine covered the various extreme weather events. It discussed how they impact individual health and overwhelm the healthcare system. Techniques to meticulously manage these crises through triage and contingency plans along with preventive strategies at various levels were taught. The lecture included ways our community and hospitals can be prepared for extreme weather events, especially cyclones, which are very common in the state of Odisha (where the medical college is situated).

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

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

Score explanation: The third-year core curriculum in Community Medicine titled ‘Concept of health and diseases’ defines the determinants of health and gives examples of each. Under the ‘Environmental determinants’ section, there is a point listed as ‘External environment’ which talks about physical, biological and psychological components. Protection and promotion of family and environmental health are the major issues in the world today. Additionally, in the chapters on various infectious diseases, like malaria & dengue, different risk factors including climate change and urbanisation were briefly covered. Also, in the lecture on ‘Zoonotic diseases’, anthropological causes for the emergence of exotic infections were discussed. The impact of climate change on water-borne and vector-borne diseases like increase of infection area, seasonal duration etc was extensively discussed through several slides in each topic under competency CM3.3, CM3.6 & CM3.7, mentioned in the competency-based undergraduate curriculum issued by NMC, under the broad topic of ‘Environment Health Problems’.

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

3	This topic was explored in depth by the core curriculum.
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2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: At SCBMCH, in the third-year core curriculum a lecture is dedicated to air pollution and its impact on respiratory health. Climate change was briefly integrated into this lecture in the form of indices of thermal comfort zones and how global warming is distorting these. Mitigation measures to reduce the burden of air pollution were discussed.</i></p> <p><i>In the fourth-year core curriculum in Internal Medicine, a disease-wise approach was taken and they briefly discussed environmental hazards, toxins and pollution as causes of diseases like COPD, related ailments and cancer.</i></p>	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: At SCBMCH, in the first year of medical school under the physiology core curriculum competency (PY11.8) cardio-respiratory changes in exercise (isometric and isotonic) were discussed and the cardiorespiratory changes in resting state and various environmental conditions (heat & cold) were compared. An entire lecture was taken for the PY11.8 in which the cardiovascular, as well as respiratory health effects of climate change were explored in depth. Again under competency PY5.9, the effects of increased environmental temperature on heart rate & cardiac output were discussed. In addition, the increased risk of cardiovascular ailments like heart attack and worsening angina due to constriction of blood vessels in cold environments was briefly described.</i></p>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: At SCBMCH, this topic was explored in depth in the first-year subject of physiology in the chapter titled 'Stress'. In the first-year lectures, the negative impact of climate change, food insecurity and population displacement on mental health were discussed. Additionally, the potential triggering of mental illnesses such as depression and anxiety from environmental exposures (such as air pollution & extreme weather conditions) were discussed. Strategies to reduce stress and improve</i></p>	

mental well-being such as through green spaces that help individuals to be connected to the natural environment whilst providing fresh air to breathe were also covered.

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

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

Score explanation: At SCBMCH a lecture on 'Sustainable Development Goals' addressed topics like eradication of poverty, and hunger and ensuring environmental sustainability. The topic 'Ecosystem and Health' was covered in the chapter 'Environment and Health'. The importance of water security and food security was also highlighted in the lecture on 'Public Health Programs' in India. Malnutrition and its causes, including food insecurity due to the changing climate, were explained. The topic 'Nutrition' aimed to present the varied dietary patterns in India, and indirectly implied the role of climate change in staple diet and water requirements. In the 2nd year of medical school, under competency CM5.3 of the Community Medicine core curriculum issued by NMC, the role of climate change in reducing freshwater resources and food production leading to impaired nutrition, health and survival was discussed along with the impact of climate change induced natural calamities on food security.

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

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

Score explanation: How climate change affects marginalised populations is not directly covered in our curriculum. However, factors that contribute to climate change such as mining in specific regions of the state (such as Sukinda) and how it affects the tribal population are mentioned. In the lecture on 'Chronic Kidney Disease', the epidemiology section discussed how indigenous communities in mining areas and older adults are disproportionately affected. Lectures also discussed how heat waves significantly affect the nomadic population. The National Rural Health Mission deals with the vast rural arena of India with numerous strategies, but the environmental control and lessons have not been elaborated.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: While describing the health hazards of air, water, noise, radiation and pollution under competency CM3.1 of the Community Medicine core curriculum the unequal health impacts of climate change wherein some regions receive more rainfall while others are more exposed to frequent droughts as well as the resulting impact of climate change on such vulnerable population living in those regions were briefly covered in 3 to 4 slides.</i></p>	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The 'Community Medicine' lecture briefly discussed the correlation between environmental hazards and toxins leading to cancers of the reproductive system. Lectures on specific diseases like endometrial, vaginal, and cervical cancer covered in Obstetrics and Gynaecology also briefly covered this topic. A lecture in forensic medicine also discussed the effect of pesticides and other toxins on women of reproductive age.</i></p>	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The chapter titled 'Occupation and Health' discussed various man-made hazards and risk factors leading to an array of diseases such as pneumoconiosis, asbestosis, neoplasia, exacerbations of COPD and asthma. Biomagnification and poisoning due to DDT and mercury were also discussed. The death of aquatic animals like fishes, corals etc. due to anthropogenic environmental damage was also covered in that lecture. Fish is a part of the staple diet in the coastal state of Odisha. Recommendations to improve water, sanitation, and hygiene to reduce the incidence of</i></p>	

dengue fever and other diseases were also discussed briefly. Another lecture on food adulteration (such as paneer, eggs, and rice) discussed how it is a threat to the surrounding communities.

1.13. To what extent does your medical school emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?

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

Score explanation: In the lecture on 'Integrated Management of Neonatal and Childhood Illness (IMNCI)' home remedies were discussed for children who present with only fever and rhinorrhea. These home remedies are part of our indigenous knowledge and value systems - such as using ginger, black pepper, honey and basil leaves. In the first year, there are dedicated hours for the students to learn and practise yoga. AYUSH (Ayurveda, Yoga, Unani, Siddha, Homoeopathy) is a separate field that focuses specifically on Ayurveda knowledge and practices. The home remedies as well as AYUSH rely heavily on the usage of plant-based substances and thus are relatively environment friendly. However, details of Ayurveda are not included in the allopathic medical curriculum.

1.14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?

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

Score explanation: The concerned topic has been vertically integrated into the core curriculum. For example, the Community Medicine lecture on the topic 'Environment and Health' covered the impact of anthropogenic environmental toxins briefly. Especially indoor pollution affecting women cooking with fossil fuels, coal and wood and how it is associated with respiratory illnesses was briefly discussed. A chapter on 'Tuberculosis' also highlighted that the incidence of these diseases is higher in people with low socioeconomic status such as those living in slums, prisons etc. More importantly, the chapter on 'Occupational Health' deals directly with anthropogenic environmental toxins and hazards related thereof, (for example, pneumoconiosis due to silica and asbestos particles, arsenic and lead toxicity, cancers, dermatitis, etc) with immediate impact on the employees and corresponding collateral damage to the entangled population. 'Tribal Health' also dealt with the effects of local environmental disruptions and the need for national policies to take their needs into account. The topic 'Disaster Management' clearly equated the changing climate with the frequency of disasters fracturing the under-served population.

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The health and environmental benefits of a plant-based diet, the concept of glycemic indexes of food, their role as risk factors for various diseases like diabetes and the role of high fibre plant-based diet in decreasing the risk of lifestyle diseases have been discussed in depth in the 5 lectures dedicated for chapter of 'Nutrition and Health' in the Community Medicine curriculum. Specific health benefits of plant-based diets on the prevention of colon cancer risks and increased longevity along with the environmental benefits of reduction in greenhouse gas emission are discussed. Moreover, the high potential of reducing carbon footprint and mitigating climate change by shifting from animal to plant-based diet has been discussed briefly.</i></p>	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The SCBMCH curriculum does not address the carbon footprint of the healthcare system.</i></p>	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
2	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.

1	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)
	<p><i>Score explanation:</i></p> <p><i>Social prescribing and counselling the patients regarding over-medicalisation, over-investigation and over-treatment, and the health and environmental co-benefits thereof by avoiding the same, are taught by our mentors in our clinical rotations positions starting from the second year until the one-year mandatory internship (house surgeon year)</i></p> <p><i>In competency PH1.10 of the second-year medical school curriculum, the need to deprescribe and its environmental benefits were discussed along with the health and environmental impact of polypharmacy.</i></p> <p><i>Non-pharmaceutical management of certain conditions (such as diabetes, hypertension and obesity) and its importance were covered in detail in medicine, pharmacology, and community medicine lectures.</i></p> <p><i>The environmental impact of surgical healthcare was discussed briefly under the topic of biohazard disposal in competency SU15.1 of the core surgery curriculum along with the appropriate methods of disposal of hospital waste.</i></p> <p><i>Also in the second year of medical school, the pros and cons of anaesthetics for pain management were discussed and it included the negative impacts of anaesthetic gases on the healthcare carbon footprint.</i></p> <p><i>In SCBMCH, sustainable clinical practice in terms of hospital waste management is adopted. Colour-coded bins with clear signage are placed at various locations throughout the medical hospital and help the patients as well as healthcare workers to conveniently use them. In the operating room, supervised use of gloves, apron, head cap and footwear reduces medical waste as well.</i></p>

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.

0	No, there are not strategies introduced for having conversations with patients about climate change
<p><i>Score explanation: In SCBMCH there has been a direct vertical integration of community medicine curriculum with general medicine under various competencies. One such competency is IM25.13 where students are asked to counsel the patient and family on the prevention of various infections due to environmental issues in a simulated environment in a DOAP (Demonstrate, Observe, Assess, Perform) session as a skill assessment. In the assessment students who are role-playing as doctors are encouraged to emphasise the link between climate change and disease when communicating with the individual who has assumed the role of the patient. Students are advised to provide a local and personal message as well as state the facts linking climate change to disease to the patient while also taking an evidence-based physician's approach.</i></p>	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<p><i>Score explanation: Lectures on clinical history taking taught us the strategies for taking environmental history as part of previous exposure. For example, Current and past exposure to metals, dust, fibres, fumes, chemicals, biological hazards, radiation etc, pesticide exposure, present and previous home location, food source(s), hazardous waste/spill exposure, drinking water supply, air pollution and many more. It has been taught that each clinical encounter does not require an extensive environmental exposure evaluation, but having environmental history information in the patient's medical records can alert the healthcare provider to potential exposure risks that may lead to adverse health effects. This was covered in subjects like Internal Medicine, Paediatrics, and Obstetrics & Gynaecology. Also, this is commonly practised during the mandatory internship year.</i></p>	

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?	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.
<p><i>Score explanation: There has been an increase in vertical integration of planetary health education topics into the first and second-year curricula since 2019 after the change in the MBBS curriculum by the National Medical Commission (NMC). SCBMCH has implemented the changes in the curriculum by incorporating the said topics into its lectures for first and second-year students. Furthermore, there has been an increase in the number of lectures on climate change and the organisation of activities</i></p>	

promoting the idea of climate change and sustainability. In the academic year 2021-22, there occurred a significant increase in horizontal and vertical integration of planetary health education into a diverse set of lectures in subjects like community medicine and general medicine. The MBBS curriculum by NMC has been strictly implemented across all subjects. Furthermore, the Planetary Health Report Cards of 2021-22 and 2022-23 have helped SCBMCH in identifying major areas for further improvement of Education for Sustainable Healthcare. However, there is currently no specific module for planetary health education. Implementation of such a dedicated curriculum would cover the vast aspects of direct health impacts and the wider determinants of health.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?

6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) .
0	There is minimal/no education for sustainable healthcare.

Score explanation: At SCBMCH the planetary health topics are well interspersed and longitudinally integrated throughout the MBBS curriculum. For example, the first-year curriculum covers biochemistry (discusses the production of free radicals by different pollutants) and genetics (discusses the effect of pollutants on DNA methylation patterns). Then in the second-year curriculum in pulmonary health, the various environmental causes of lung carcinoma are discussed. A chapter on 'Neoplasia' covers environmental pollutants and their relation to carcinogenesis. Within the past 2 years, all the lectures throughout the MBBS curriculum have been remodelled according to the new "Competency-based Undergraduate Curriculum for the Indian Medical Graduate" introduced by NMC as a result of which many more topics pertaining to Planetary health have been added.

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?

1	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.

Score explanation: There is a lack of awareness about planetary health and sustainable healthcare. There is no dedicated staff member or faculty who is responsible for overseeing the integration of planetary health into the curriculum or improving campus sustainability.

Section Total (61 out of 72)

84.72%

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Are there additional curriculum resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation:</i> At SCBMCH, individual faculties have conducted research regarding health and environmental links at the community level (examples are “Population and Environment”, and “Water securing and rainwater harvesting” at Community Medicine Publication – SCB Medical College & Hospital). However, this is not their primary research focus.</p> <p>The university that SCBMCH is a part of (Utkal University) has a Centre for Environment, Climate Change and Public Health. Utkal University has finally added the MPH course under its umbrella (Master of Public Health (MPH)), which will give a boost to the healthcare-associated studies from this academic year. A seminar was conducted on Climate Change, Sustainability and Public Health by the university. Research is carried out on topics such as Gender, climate change and the politics of vulnerability; Governance challenges in addressing climate concerns in Coastal Asia and Africa; women-headed households, migration and adaptation to climate change in Mahanadi delta by Asha Hans from the department of political science.</p>	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.

1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation:</i> Utkal University has a Centre for Environment, Climate Change and Public Health that does planetary health research.</p> <p>Furthermore, The Dept. of Anthropology conducted a review analysis of indigenous tribal healthcare practices and their outcomes (flyer Post Congress WAC-2023 UTKAL). Utkal University has also now included Masters of Public Health as a new curriculum under its domain. A recent seminar was “Health for Awareness about Sustainable Developmental Goals (SDGs)” [https://www.youtube.com/watch?v=LDrKB48-TJk].</p> <p>Moreover, the PG Department of Botany has carried out many interdisciplinary planetary health research projects. To name a few:</p> <p><i>Palai Jayashree (2015). Tolerance of some roadside plants of Bhubaneswar city, Odisha against vehicular air pollution. A dissertation thesis submitted for partial fulfillment of the Master of Science in Environmental Science of under the guidance of Prof. AnathaBandhu Das and Mr. Srinivas Acharya, P.G. Department of Botany, Utkal University.</i></p> <p><i>Satyabrata Sarangi (2019). Monitoring and Characterization of Particulates of Bhubaneswar city, Odisha. A dissertation thesis submitted for partial fulfillment of the Master of Science in Environmental Science of under the guidance of Dr. Srinivas Acharya, P.G. Department of Botany, Utkal University.</i></p> <p><i>Subhashree Debasmita Mishra (2019). Social Impact Assessment of Air and Noise pollution at Bhubaneswar city, Odisha. A dissertation thesis submitted for partial fulfillment of the Master of Science in Environmental Science of under the guidance of Dr. Srinivas Acharya, P.G. Department of Botany, Utkal University.</i></p> <p><i>Alisha Munda (2021). Physico-chemical analysis of sewage systems under of Bhubaneswar Municipality Corporation, Odisha. A dissertation thesis submitted for partial fulfillment of the Master of Science in Environmental Science of under the guidance of Dr. Srinivas Acharya, Department of Botany, Utkal University.</i></p>	

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>medical school</u>?	
3	Yes, there is a process in which community members impacted by climate and environmental injustice have decision-making power in the climate + environmental research agenda.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	No , but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.

0	There is no process, and no efforts to create such a process.
<i>Score explanation: No public information is available for community participation in driving the agenda for research.</i>	

2.4. Does your <u>institution</u> have a planetary health website that centralises ongoing and past research related to health and the environment?	
3	There is an easy-to-use, adequately comprehensive website that centralises various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that attempts to centralise various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.
<p><i>Score explanation:</i></p> <p>1. SCBMCH, the medical school, has an easy to use, adequately comprehensive website that centralises various campus resources available for all research topics across 24 specialities as well as 15 superspecialities; including the topics related to health and environment which are mainly carried out under the Community Medicine speciality, by the respective department. It also provides information about upcoming events like workshops, seminars, conferences, publications, mentors and relevant funding opportunities. However the main focus of the website is not planetary health and it misses out on key information like leaders in planetary health in our institution. Website: https://scbmch.in/research-publications/</p> <p>2. Utkal University has a website that attempts to centralise various campus resources but is not specific to health and environment and has not been updated. Website: https://utkaluniversity.ac.in/research-development/</p>	

2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?	
4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.

Score explanation: Examples include:

https://utkaluniversity.ac.in/photo_gallery/utkal-university-conducts-a-seminar-on-climate-change-sustainability-and-public-health-17th-june-2022/, Awareness about increasing scales of heatwaves in the city of Odisha, Observing World Environment Day and World Health Day ([News & Events Archive](#)).

The PG Department of Botany of the Utkal University has recently hosted an International webinar on Aeroallergen, Particulate matter leading to respiratory ailments, designing devices for the preventive measures on 22nd of December, 2021.

A National Seminar on Climate Change was also hosted by the PG Department of Zoology. Also awareness activities, plantation activities, and cleanliness drives are being carried out regularly. For example, on 4th Jan 2023 a cleanliness and plantation drive based on the theme "Clean SCB, Green SCB" was conducted.

2.6. Is your medical school a member of a national or international planetary health or ESH organisation?

1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation

Score explanation: No, the medical school is not a member of such an organization.

Section Total (9 out of 17)

52.94%

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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Community Outreach and Advocacy

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

3.1. Does your medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation: No such meaningful partnership exists between SCBMCH and the community.</i></p>	

3.2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.
<p><i>Score explanation: Events such as plantation drives, cleanliness drives, donate-a-tree initiatives, and Swatch Bharat Abhiyan activities are carried out at SCBMCH annually. For example a community-facing cleanliness and plantation drive on the theme “Clean SCB, Green SCB” was conducted by the Junior Doctors Association starting from the Dean Office ground. Renowned Odia actor Sabyasachi Mishra joined us in this novel initiative along with several other people.</i></p>	

3.3. Does your medical school have regular coverage of issues related to planetary health and/or	
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sustainable healthcare in university update communications?	
2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not receive communications about planetary health or sustainable healthcare.
<i>Score explanation: The medical school does not provide students with regular coverage of issues related to planetary health or sustainable healthcare.</i>	

3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?	
2	Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers
<i>Score explanation: No such courses for post-graduates are available at Utkal University.</i>	

3.5. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?	
2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centres have accessible educational materials for patients.
<i>Score explanation: No information and accessible material are available for the patient.</i>	

3.6. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?	
2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.

0	No affiliated hospitals have accessible educational materials for patients.
<i>Score explanation: No information and accessible material are available for the patient.</i>	

Section Total (3 out of 14)	21.43%
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Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 medical school or your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school or institution encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

Score explanation: The institution, Utkal University in Odisha, has a dedicated wing for environmental science, with yearly admission into masters/post-graduation courses under it. It is also a centre of excellence (CoE) for environment, climate change and public health.

*It has numerous publications (eg: Impact of Climate Change On Human Health Concerning Climate-induced Natural Disaster: Evidence From an Eastern Indian State.
<https://go.gale.com/ps/i.do?p=AONE&u=anon~73005c71&id=GALE|A763094686&v=2.1&it=r&sid=sitemap&asid=8611268a>),*

numerous research projects (eg: Quantifying Impacts of South Asian Aerosols on Regional and Arctic Climate (QUISARC)/2018-2020, with a grant of Rs. 79 lakhs for this project from Ministry of Earth Sciences, Government of India.),

and numerous seminars/conferences/webinars (eg:International webinar on “Aeroallergen, Particulate Matter 2.5 Leading To Respiratory Ailments, Designing Devices For The Preventive Measures” 22nd December 2021). [Source: utkaluniversity.ac.in].

Currently there are 2 ongoing research projects on the topic of Planetary Health that are being carried out Medical Students of SCBMCH.

However there is a lack of adequate resources and funds directly for medical students, although multidisciplinary research is possible.


4.2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.

1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation: There are various opportunities for research at an undergraduate level at our medical school. The ICMR STS (Short Term Studentship) program is an ICMR (Indian Council of Medical Research) funded program that provides Rs 25000 per month for 2 months as stipend to encourage undergraduate students to take up research as a career in future. The recently launched UG Research Incubator in SCB, first of its kind in any medical college, has made taking part in research for UG students simple and easy by reducing the hassle to get approvals, funds etc.</i></p>	

<p>4.3. Does the <u>medical school</u> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.</p>	
2	The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: Yes, SCBMCH has a webpage; https://scbmch.in/research-publications/ that features some information about the projects about sustainable healthcare which have been approved and are underway. However, the webpage is not specific for planetary health related projects and the information provided is not sufficient.</i></p>	

<p>4.4. Does your <u>medical school</u> have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?</p>	
2	Yes, there is a student organisation with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support .
0	No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation: No such student organisation is dedicated to planetary health engagement, but the Student Services Guild (Student Council) is responsible for making such decisions or initiatives.</i></p>	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>medical school</u> or <u>institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Score explanation: Students services guild (student council) is responsible for making such decisions or initiatives depending on the interests of the council members.</i></p>	

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)	
1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)
<p><i>Score explanation: Programs organised for 'Environment Day' and 'Earth Day' included speakers on planetary health topics. Planetary health was integrated into various activities including debates, extempore speech, and poster design. Students also had the opportunity to volunteer for plantation and cleanliness drives. Awareness about Sustainable Developmental Goals(SDGs) was done with the aim of creating awareness, under Utkal University.</i></p> <p> <i>A Seminar Took Place In Utkal University To Let Students Know About Sustainable Development...</i></p>	

Section Total (7 out of 15)	46.67%
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Are there additional student-led initiative resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Campus Sustainability

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

5.1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<i>Score explanation: No staff member or task force exists for overseeing campus sustainability at SCBMCH.</i>	

5.2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030
3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
<i>Score explanation: SCBMCH does not have a stated goal for the reduction of CO2 emissions.</i>	

5.3. Do buildings/infrastructure used by the <u>medical school</u> for teaching (not including the hospital) utilize renewable energy?	
3	Yes medical school buildings are 100% powered by renewable energy

2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.
<p><i>Score explanation: <u>Current infrastructure renovation</u> includes the installation of a solar photovoltaic system with a capacity of 15kWp on-site to reduce the energy demand from non-renewable energy sources.</i></p>	

<p>5.4. Are sustainable building practices utilised for new and old buildings on the <u>medical school</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?</p>	
3	Yes, sustainable building practices are utilised for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilised for new buildings on the medical school campus, but most old buildings have not been retrofitted .
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.
<p><i>Score explanation: <u>In structural and non-structural applications</u>, for both concrete and masonry work minimum of 30% of cement is replaced with fly ash. All paints and adhesives used in the project have low volatile organic compounds (VOCs) content. The insulation, refrigerant, and fire fighting system used in the building have no components with ozone depletion potential. The majority of the old building have been or are currently being renovated. Such as replacing old, high- energy-consuming fluorescent bulbs with newer, low-energy-consuming LED bulbs and whitewashing buildings to reflect sunlight which would make the buildings naturally cooler.</i></p>	

<p>5.5. Has the <u>medical school</u> or <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?</p>	
2	Yes, the medical school or institution has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school or institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school or institution has not implemented strategies to encourage and provide environmentally-friendly transportation options.

Score explanation: SCBMCH has [battery-operated vehicles](#) for transporting patients within the campus. However, strategies to encourage and provide environmentally-friendly transportation options for students have not been implemented.

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

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

Score explanation: There is an [established biomedical waste management system](#) which includes different bodies that are responsible for collecting and recycling waste (conventional recycling program). Coloured coded dustbins are available for the segregation of different types of waste in hospitals but not in academic blocks or hostels.

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

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

Score explanation: No sustainability guidelines for food and beverages exists at SCBMCH.

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

3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is not engaged in efforts to increase sustainability of procurement.

0	There are no sustainability guidelines for supply procurement.
<i>Score explanation: There are no publicly available sustainability guidelines for supply procurement, however those tenders are prioritised which have better cost-efficiency and sustainability promises.</i>	

5.9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u>?	
2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required .
0	There are no sustainability guidelines for medical school events.
<i>Score explanation: There are no sustainability guidelines for medical school events.</i>	

5.10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.
<i>Score explanation: Provisions of recyclable and reusable instruments are being done via the medical school and the government. Increasing awareness of biomedical waste management guidelines via training sessions.</i>	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	The institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<i>Score explanation: In India, for government medical colleges the financial investment portfolios are not easily accessible and we were not able to find any public information about this. We might need to</i>	

file a right to information to understand this. But, this is beyond our capacity right now. The only information that could be obtained was that [the school website](#) is supported by a private bank as a part of their corporate social responsibility and [articles](#) have been found linking the bank with fossil fuel financing and infrastructure projects. As none of the options deems fit we have decided to give it a score of 0.

Section Total (7 out of 32)

21.88%

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Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Grading

Section Overview

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

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

Planetary Health Grades for the Srirama Chandra Bhanja Medical College and Hospital (SCBMCH)

The following table presents the individual section grades and overall institutional grade for the Srirama Chandra Bhanja Medical College and Hospital on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(61/72) \times 100 = 84.72\%$	A-
Interdisciplinary Research (17.5%)	$(9/17) \times 100 = 52.94\%$	C
Community Outreach and Advocacy (17.5%)	$(3/14) \times 100 = 21.43\%$	D-
Support for Student-led Planetary Health Initiatives (17.5%)	$(7/15) \times 100 = 46.67\%$	C
Campus Sustainability (17.5%)	$(7/32) \times 100 = 21.88\%$	D-
Institutional Grade	50.43%	C

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Srirama Chandra Bhanja Medical College and Hospital has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for Srirama Bhanja Medical College and Hospital

