



Climate Change and the Determinants of Health in Medical Schools

Learning Objectives

We propose nine learning objectives, of which four are core objectives to be used by all educators, regardless of the teaching format. Learning objectives are based on the WHO Health and Climate Change module to ensure comparison of our evaluation data with theirs.

Core Objectives (with optional sub-topics)

1. Climate change as an environmental hazard: explain how climate change impacts on health inequalities and the wider determinants of health

- a) Outline the effects of climate change on health.
 - Mechanisms by which climate change affects the wider determinants of health
 - Disease processes affected by climate change
 - Examples of health effects that have already been observed
 - Examples of projected health effects – in developing countries and in the UK
- b) Describe the impact of climate change on health inequalities.
 - The exacerbation of inequalities through the impact of climate change
 - The role of inequalities in causing climate change
 - The theory of contraction and convergence
- c) Discuss ethical issues over distributive justice in carbon reduction

2. Define the relationship between adaptation and mitigation and the health co-benefits of each.

- a) Define mitigation and adaptation
- b) Give an example of an adaptation measure which runs counter to mitigation strategies
- c) Give an example where adaptation and mitigation strategies are synergistic
- d) Health co-benefits relating to policies on:
 - Redistribution of resources (e.g. carbon allowances)
 - Transport, food production, energy generation, home energy efficiency
 - Population control

3. Demonstrate clinical, leadership and management skills for low carbon healthcare

- a) Describe how sustainable lifestyle interventions (e.g. promoting active travel, dietary change, home energy efficiency, sustainable occupations) can be used to prevent common diseases.
- b) Describe ways in which patients may be supported to care for themselves (e.g. through patient information & training, provision of direct access to health data, supporting uptake of home therapies, use of shared decision making techniques, development of patient-centred care plans, provision for flexible/patient-initiated access to care).
- c) Demonstrate effective conduct of a telephone consultation with a patient.
- d) Understand the principles and methods of service improvement with respect to sustainability, efficiency and patient experience. Describe how to obtain feedback from staff and patients, analyse processes, identify improvements and plan how these could be implemented and evaluated.
- e) Demonstrate awareness of the role of doctors as managers, including seeking ways to continually improve the environmental impact of care, and the use and prioritisation of resources.

4. Demonstrate advocacy skills for action on climate change and the determinants of health

- a) Demonstrate understanding of the wider implications of the "Duty of a doctor registered with the GMC" to "protect and promote the health of patients and the public": give three ways in which doctors may influence the determinants of health for their patients
- b) Explain how behaviour change models apply to promoting healthy, sustainable lifestyles
- c) Informal advocacy: discuss with colleagues whether or why individuals in the NHS should act on climate change, e.g.:
 - Importance of a healthy global and local environment to the health of patients
 - The potential benefits of sustainable care to patient experience
 - Health economics: increased productivity with fixed NHS resources
 - Compliance with carbon reduction legislation and targets
 - Leadership in local communities
- d) Formal advocacy: give a 15 minute presentation or write a letter to senior colleagues on what can the NHS do to mitigate against climate change, covering e.g.
 - NHS carbon reduction strategy
 - Trust level involvement: monitoring, reporting and reviewing carbon
 - Clinician engagement (prevention, self-care, lean pathways, low carbon treatment choices)
 - Partnerships with local councils and community organisations
 - Advocacy and awareness raising
- e) Describe strategies for creating a support network to increase the effectiveness of professional actions
- f) Discuss the potential conflicts of interest presented by a transition to sustainable healthcare (e.g. challenge to dominance of bio-medical models in healthcare, patient expectations, commercial interests)

Additional (Optional) Objectives

- 5. Explain the basic scientific evidence base for global warming and climate change. Make reference to systems theory and importance of feedback loops (normative and amplificatory) in auto-regulation of climate and global biological systems.
- 6. Critically appraise scientific evidence linking climate change and health
- 7. Access information sources on climate change, health and mitigation measures and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education.
- 8. Explain the concept of "carbon footprint" of individuals, organisations, products and clinical pathways, various methods of footprinting and the advantages and disadvantages of each
- 9. Discuss psychological aspects of environmental behaviour change (why and how people change or don't change)

Further Information

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