



Is climate change the biggest threat of the 21st century

Teaching note

This teaching note was written by **Stefi Barna** and **Aditya Vyas**, Medact (United Kingdom). It was edited by Charlotte Butler, Project Consultant. The teaching note is intended as an aid to instructors in the classroom use of the case study *Is climate change the biggest threat of the 21st century*.

© 2016, medicalpeacework.org and the authors

All rights reserved. Permission is granted for non-commercial reproduction, translation and distribution of the case study, as long as medicalpeacework.org and the author are given credit. medicalpeacework.org and the author do not guarantee that the information in this case study is complete and correct and shall not be liable for any damages incurred as a result of its use.



This teaching note was funded with support from the European Commission. It reflects only the authors' view. Erasmus+ and the Commission are not responsible for any use that may be made of the information it contains.

How to introduce the case

The aim of the case is to identify direct and indirect causes of ill health and consider how to assess cause and risk for multi-factorial health determinants. It also helps students recognize the ethical tensions inherent in the various roles of a health professional.

Before reading the case, teachers can begin with this optional brainstorming session to identify student familiarity with the topics treated in the case.

Alternatively the teacher can briefly introduce the characters and the setting and let student begin reading and viewing links.

Optional opening brainstorm on social determinants: Ask the class if there is a particular aspect of the social determinants of health that they are interested in. Are they concerned about poverty? Homelessness? Addiction? Access to healthcare? Discuss why they are interested and what they know already. Ask whether students have ever found themselves in a situation where they wanted to help solve a problem and found out that the situation was much more complex than they realised? What happened and what were the dilemmas? Then introduce Tahmina and her interest in refugee health.

Optional opening brainstorm on refugee health: Ask the class to discuss what they know about migrants, refugees and asylum-seekers in Europe: what are the main drivers of migration, what are the health concerns in the country of origin and the country of settlement.

Learning outcomes and key teaching points

Learning outcomes	Key Teaching Points
<p>Knowledge</p> <p>Describe the mechanisms by which climate change affects health</p>	<p>Climate change is essentially a health issue. There are direct and indirect health effects. The health effects of climate change are unequally distributed within populations and between countries, in terms of geographic location, social status, access to power or resources, and benefit from carbon energy.</p>
<p>Attitudes / Values</p> <p>Discuss the extent of a doctor's responsibility to protect and promote health</p> <p>Recognise and articulate personal values on controversial health issues</p>	<p>There seem to be ethical tensions between allocating resources to individual patients and protecting the environment upon which the health of the wider community depends. Does the concept of 'Do no harm' apply only to the patient in front of you, or does it include responsibility for a wider community?</p> <p>Understand what factors have influenced the values you hold (family background, education, life experiences, etc.)</p>
<p>Skills</p> <p>Demonstrate simple advocacy skills.</p>	<p>Small steps in advocacy are not difficult : present information to a colleague; tweet, blog or write a newsletter article, propose a small change in personal or organisational behaviour</p>

Learning Activities

Discussion: Environmental determinants of health [after first email in Part 2]

How should Dr Thompson respond to Tahmina's questions? What are the major concepts linking the environment to health that you are aware of? What does the science actually say?

Discussion: My values [after second email in Part 2]

Dr Thompson asked Tahmina to reflect on her values. Is she right in her concerns about the doctor's duty? Discuss by applying different bioethical perspectives on the problem of climate change and health.

Students provide personal perspectives on the questions posed by Dr Thompson.

Connect "duty" to "primum non nocere". Doctors must consider the harm before prescribing any given treatment; should we also consider whether we are causing harm by doing nothing?

Review the four bioethical principles described by Beauchamp and Childress: autonomy, beneficence, non-maleficence, justice.

Activity: Mechanisms and pathways [at end of Part 2]

Ask students to work in small groups to create a flowchart to illustrate the main causes, mechanisms and pathways by which climate change affects population health discussed in the references Tahmina encounters.

The flowchart diagram below is a sample. When the groups display their own models, discuss whether they have captured the unequal distribution of the health effects of climate change (within populations, and between countries, in terms of geographic location, social status, access to power or resources, and benefit from carbon energy, etc).

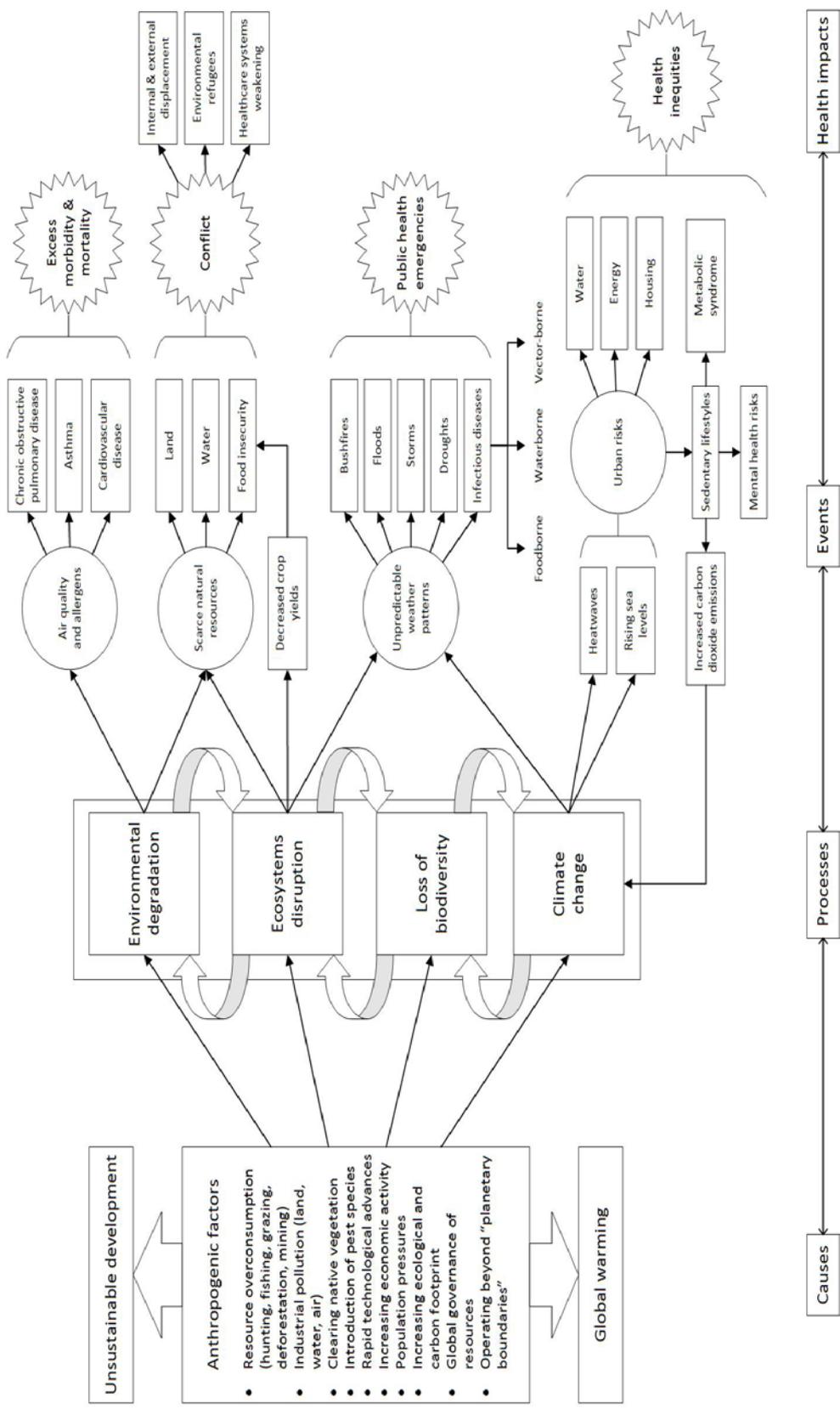
Discussion: The duty of a doctor [at end of Part 3]

What is the role of the Hippocratic Oath in modern medicine? Does the concept of 'Do no harm' apply only to the patient in front of you, or does it include responsibility for your wider community, such as a neighborhood or a city or a region? What about people in other countries? What about future generations? What about non-human living beings? Does it relate to an issue like climate change?

Is this really part of a doctor's/nurse's job? Isn't it enough to be a good clinician and leave other problems to other experts? Would our work ever end if we took on all issues?

How can we best choose between allocating resources to individual patients and allocating resources to protect the environment upon which human health depends?

Should Tahmina have learned about this in medical school, given how overfull the medical/nursing curriculum is? Is there a difference between understand social determinants of health such as poverty or discrimination, and environmental determinants of health such as climate change? What about war? Introduce Galtung's concept of structural violence – the social, political and economic structures which violate basic human needs.



Activity: Communication skills for advocacy [at end of part 4]

A preventive healthcare practitioner understands the wider determinants of health, the links between environment, health and lifestyle, and the health benefits of climate change adaptation and mitigation policies. Advocating for these issues requires good communication skills. Test your understanding of this chapter by practicing a variety of communication styles to explaining the key issues in this case.

1. Take an informal, conversational approach. Speak to a friend or fellow student about what you have understood from this chapter and the previous one. Use the list of points below, or make your own, but try to keep your 'story' to five minutes or less. Afterwards, note down which parts of your explanation seemed to go over well or badly, and why you think that might be. Then ask your friend for their impressions of the conversation, and what you might have done more effectively. Use the feedback to triangulate your assessment of your skills. If possible, have another go with a new interlocutor. This is called informal advocacy, and it forms an important part of doctors' health advocacy.

Alternatively, write a blog about from Dr Patel's perspective about her first month as a doctor, in simple language appropriate to a lay audience, including what you consider to be the key ideas and challenges

2. Try out a formal proposal. Set up in a similar discussion with a friendly faculty member or supervising clinician. Take just a few of your points, make them more concise and ask for an action or outcome. Your conversation should take no more than 2-3 minutes. Reflect again on what worked and ask for feedback. You may be asked to put your thoughts into writing for further consideration.

Alternatively, put it in writing. Write a brief letter to an influential person in the media, politics, policy or health management. Focus on clear, concise messages and what actions you as a healthcare professional would recommend.

Additional group work and extension assignments

Understand the Anthropocene – a geological epoch dominated by humanity. Reference: video from United Nations Rio+20 conference <https://vimeo.com/39048998>

Understand the concept of Planetary Boundaries – are we operating beyond our means? When did our rate of resource utilisation surpass the planet's capacity for resource regeneration? Consider the health effects of pollution, depletion and biodiversity loss at present and in the near future. Is climate really the most important issue? References: (1) Steffen W, et al. (2015) Planetary boundaries: Guiding human development on a changing planet. *Science*. 347(6223):1259855. (2) Rockstrom J, et al. (2009) A safe operating space for humanity. *Nature*. 461(7263):472-5

Further Reading & Resources

Medact UK (2014) Climate science for health professionals. Available from: <http://www.medact.org/resources/climate-science-health-professionals-first-briefing/>

Climate Institute of Australia (2008) *Climate Change Health Check 2020*. Available from: <http://www.climateinstitute.org.au/articles/publications/climate-change-health-check-2020---report.html>

Thompson T, Walpole S, Braithwaite I, Inman A, Barna S, Mortimer F (2014) 'Learning objectives for sustainable health care', *Lancet* 384: 9958, 1924-1925. Available from: <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2962274-1/fulltext?rss%3Dyes>

University of East Anglia (2014) 'Can students influence the health of people and planet?' *Guardian*. Available from: <http://www.theguardian.com/university-east-anglia-partner-zone/2014/dec/04/can-students-influence-the-health-of-people-and-planet>

Gallup (08/12/14). *Honesty/Ethics in Professions* [online]. Available from: <http://www.gallup.com/poll/1654/honesty-ethics-professions.aspx>

Centre for Sustainable Healthcare. *Education* [online]. Available from: <http://sustainablehealthcare.org.uk/education>

(all links accessed 09/03/15)