



# Attitudes to Climate Change in the Medical Curriculum: Key Findings from a PhD Study



Dr Graeme Horton <sup>1</sup>, Prof Parker Magin <sup>1</sup>, A/Prof Grant Blashki <sup>2</sup>, Prof Dimity Pond <sup>1</sup>,  
1. The University of Newcastle, Australia; 2. The University of Melbourne, Australia.

## Background

Tackling climate change could be the greatest global health opportunity of the 21st century according to the Lancet (1). Peak bodies have called on medical curricula to include the health impacts of climate change(2). There is a need for information on the views of students and educators about how this is best done.

## Literature review followed by three-stage study design

**Stage 1:** Four focus groups were conducted in 2010 with 27 medical students from two Australian universities. Student attitudes and perspectives on climate change and its relevance to the medical curriculum were explored.  
**Stage 2:** An online questionnaire was developed in light of findings from literature and from Stage 1 of study. The questionnaire asked about knowledge of the health impacts of climate change, attitudes to the health impacts of climate change topics in the medical school curricula and preferred methods of learning about climate change. The questionnaire was completed by students from four Australian universities in 2013 (283 students, RR=8.7%).  
**Stage 3:** Semi-structured individual interviews were conducted with 14 medical educators from six Australian universities in 2014-2015. Interviews explored their views about climate change in the medical curriculum and the implications on curriculum development of student attitudes as found in Stage 1 and 2 of the study.

## Considerations which emerged from the study which relate to developing learning activities about the health impacts of climate change in medical curricula

1. Keep in mind possible divergent opinions among learners about climate change, which may be related to information sources, personal experience, or political world views.
2. Be prepared to address a lack of awareness of the medical literature about the health impacts of climate change in both students and Faculty staff.
3. Students may undervalue research methods other than randomised controlled trials(RCTs), in fields where RCTs are not possible or appropriate (eg climate science).
4. It can be beneficial to focus on the clinical relevance of the health impacts of climate change, utilising patient stories and experiences where possible.
5. If introducing new topic areas, be aware of student and Faculty concern for erosion of other valued content; this may be alleviated by looking for ways to integrate and use climate change examples to teach or provide the context for the learning of core competencies.
6. Debates may be a popular learning activity, but may be better utilised for considering how to optimally address climate change rather than having medical students participating in or listening to debates about climate science.
7. If introducing topics which may have controversial aspects, it can be important to prepare educators, tutors and students to appropriately, sensitively and skilfully manage differing opinions in the learning environment.
8. Climate change may be one way for students to learn about advocacy, although many may not see climate change advocacy as part of a doctor's role.
9. Remember vertical integration and the powerful influence of workplace culture and senior supervisors on junior doctors if seeking to implement environmentally sustainable work practices and advocacy.
10. Recognise the potential for students to creatively problem solve, to engage in systems thinking and finding optimal ways for future healthcare to address climate change.

**References:** 1. Costello A, Abbas M, Allen A, Ball S, Bell S, Bellamy R, et al. Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission. Lancet. 2009;373(9676):1693-733. 2. Royal Australasian College of Physicians. Climate change and health 2016 [cited 2017 July 31]. Available from: <https://www.racp.edu.au/fellows/resources/curated-collections/climate-change-and-health>.

**Acknowledgements:** The authors gratefully acknowledge the help of the medical students and educators who participated in the study.

**Contact and Enquiries:** [graeme.horton@newcastle.edu.au](mailto:graeme.horton@newcastle.edu.au)