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## Editorials

# Reducing the carbon footprint of medical conferences

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#### Doctors must lead by example

The fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC), published earlier this month, leaves no room for complacency.<sup>1</sup> It makes clear that warming of the climate system is unequivocal and that the increase in globally averaged temperatures since the mid-20th century is most likely due to increased human induced greenhouse gas emissions. It also states that warming and resultant sea level rises will continue for centuries even if emissions are stabilised. When scientific consensus reads like this, we are in trouble. The time to act is now.

The threat to human health from climate change—through malnutrition, disease, and flooding—is substantial, and in some parts of the world, immediate.<sup>2</sup> Most of the health burden of climate change is borne by children in developing countries.<sup>2</sup> It is ironic that doctors, for whom protecting health is a primary responsibility, contribute to global warming through unnecessary attendances at international conferences.

Lord Kelvin, physicist and past president of the Royal Society, said, “if you cannot measure it, you cannot improve it,” and it is encouraging that doctors are measuring the carbon footprint of their conference activities. Kelvin also said, “heavier-than-air flying machines are impossible,” but he was wrong. Last year, many doctors used such a machine to attend the European Respiratory Society annual congress in Munich. Julian Crane estimated that the 17 000 delegates generated about 4000 tonnes of carbon dioxide from travel alone.<sup>3</sup> Earlier this month, Callister and Griffiths reported the carbon footprint of the American Thoracic Society meeting in San Diego. The meeting was attended by about 15 000 delegates who generated an estimated 10 779 tonnes of carbon dioxide from air travel.<sup>4</sup>

Although probably serious underestimates, these are big numbers.<sup>5</sup> How do we put them in context? The yearly per capita carbon dioxide emission in the United States is about 20 tonnes, so the 11 000 tonnes from the American Thoracic Society meeting is equivalent to that produced by around 550 US citizens in one year. But the US, the most energy hungry nation on earth, is not the best comparator—11 000 tonnes of carbon dioxide is equivalent to that produced in one year by 11 000 people in India and 110 000 people in Chad. The last is arguably the most appropriate comparison as climate change

has probably contributed to the disappearance of Lake Chad, formerly the sixth largest lake in the world; sand dunes now encroach on its drying bed, imperilling the lives of thousands.<sup>6</sup>

The IPCC report also makes clear that climate change will affect us all. Sea levels will rise, increasing the risk of coastal flooding, and tropical cyclones and storms will become more severe.<sup>1</sup> River floods, such as those in central Europe that left more than 200 000 people homeless and about 100 dead, will become more common, as will heat waves like the one in Europe that claimed 35 000 lives in August 2003.<sup>7</sup>

Fortunately, opinions on conferences are changing. Two years ago one of us was invited to a world congress in Australia. It was the classic free lunch—registration, hotel, and air travel paid by the organisers and all for a 15 minute presentation. They did not offer to pay the environmental cost of the journey—6-10 tonnes of carbon dioxide equivalents pumped into the upper atmosphere, where they would warm the world for a century. A request on environmental grounds to make a video presentation elicited this response, “The reason for your wish to not attend seems, to say the least, unusual. We are not prepared to do video conferences.” And then after pulling out, “we have many emergency matters to deal with and whilst a number of speakers have had a very genuine reason for pulling out, we were astounded at this email.” Already such attitudes seem surprising and Trisha Greenhalgh wrote recently in the *BMJ* about her more positive experience of asking to lecture by video link.<sup>8</sup>

The Cochrane Collaboration is an example of an international medical organisation taking action to reduce the carbon footprint of its conferences. With over 15 000 members in 100 countries most of its work is done electronically. However, its annual conference involves substantial amounts of travel. The most recent was in Dublin in 2006, with 820 delegates from 40 countries. However, the organisers piloted electronic ways of enabling people to “attend” the conference on the internet, and a plenary session used video conferencing to “bring” keynote speakers from Papua New Guinea, Tunisia, and Uganda. This is a step in the right direction. The *BMJ*/IHI annual International Forum on Quality and Safety in Health Care is taking similar measures. At the meeting in Barcelona in April, videos of the four main plenaries and the subsequent panel discussions will be available on [bmj.com](http://bmj.com) in both Spanish and English.

High quality medical education is essential for patient care, and the educational benefits of conference attendance must also be considered. But Crane is sceptical, “let's be honest, when did you last learn anything really important at a large meeting?” His view is consistent with research findings. Evidence that attending conference lectures improves practice is scant, and other methods are more effective.<sup>9</sup><sup>10</sup> Online distance learning deserves more attention. But even if conferences were effective, who should decide if the benefits are worth the costs—a doctor from Colorado or a fisherman from Chad?

Air travel is not the biggest contributor to greenhouse gas emissions, but it is one of the fastest growing. In 2001 the IPCC estimated that aviation caused 3.5% of human induced global warming, which could rise to 15% by 2050. Air travel is also one of the easier aspects of our high carbon lives to change. Scope exists for ingenuity and experimentation, as well as investment in new technologies to overcome distance. A more local focus may also have hidden benefits. Reducing travel is just part of how we must tackle global warming in the next 20 years. Other aspects of our lives must also change, and we must lobby governments to implement the laws and conventions needed to ensure that we ration our carbon use within sustainable limits.<sup>5</sup><sup>11</sup> Climate change is a major threat to global public health and doctors must lead by example.

## Footnotes

- **Competing interests:** IR is a contributor to the Cochrane Collaboration, which is mentioned in this editorial. FG is editor in chief of the *BMJ* and its sister products, which include BMJ Learning and other online educational resources.

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