Climate change, the environment and respiratory disease

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Shareable abstract (@ERSpublications)
Respiratory clinicians are no strangers to the concept of both occupational and recreational exposures affecting the lung, but evolving factors like climate change and air quality can also play a critical role in respiratory health. https://bit.ly/42XFCUA

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We are delighted to introduce the latest issue of *Breathe*, which we hope you will find both highly topical and a little bit different from our usual content, with a series of articles examining the relationship between respiratory disease and the environment. The concept of the outside world affecting the lungs is nothing new to respiratory physicians, with the history of respiratory medicine littered with examples of occupational or recreational exposures causing illness. But, while traditional exposures like smoking and asbestos remain highly important, it is increasingly clear that less well characterised factors, such as the home environment, air pollution and climate change, will play an increasing role in the practice of respiratory medicine. In addition, there is a growing awareness of the impact that respiratory illness and its treatment, and particularly the treatment of airways disease, can have on carbon emissions and the broader environment [1].

A key part of this issue is a narrative review of the relationship between climate change and respiratory disease from Andersen *et al.* [2], which will provide the reader with an overview of the epidemiological evidence of climate change and respiratory disease, outline interactions between climate change, air pollution, other common environmental health hazards and lung health, and discuss how clinical practice can mitigate the effects of climate change on respiratory patients. A forthcoming piece from other experts within the European Respiratory Society (ERS) family will discuss in greater detail what we now know about different forms of air pollution and their effect on respiratory illness. Relationships between respiratory disease and the environment do not all need to be negative, however, and a fascinating review from Johannessen *et al.* [3] introduces the concept of greenness, how greenness exposure can be beneficial for respiratory health, and the different mechanisms which may mediate this benefit.

Air quality and the home environment are perhaps of particular relevance in paediatric respiratory disease, and complementary reviews in this issue examine both the role of air pollution and housing quality on respiratory health in paediatric populations [4].

The traditional bad guys have not gone away of course, and this issue contains a state-of-the-art review from experts in occupational respiratory disease on how exposures in the modern workplace remain of paramount importance to the practising respiratory physician [5]. A forthcoming piece will discuss challenges and perspectives of tobacco cessation, with a focus on particularly at risk groups of individuals, such as patients with asthma, COPD and other relevant disorders.

Our early career member (ECM) content in this issue is reflective of the broader issue theme, with both our Journal club [6] and Landmark papers [7] series focused on the exposome, a phrase coined by Christopher Wild to describe environmental exposures from the pre-natal period onwards and their interaction with the genome [8], and how it can be used as a concept in the care of respiratory patients. Early career readers should also find our ECM forum piece of interest, and in particular its discussion of the evolving ERS NEXT programme, which aims to foster leadership and networking within the ERS ECM community [9].

As ever, we have lots of other clinically relevant educational material, including a superb review of chronic ventilatory support in different respiratory illnesses [10], and the continuation of our Myths and maxims in paediatric respiratory medicine series, with articles examining paediatric radiology interpretation and bronchodilator usage in paediatric asthma exacerbations.

This issue of *Breathe* represents the latest in our series of collaborations with the ERS Assemblies. In this case we are extremely grateful for the hard work of our colleagues from ERS Assembly 6, and in particular Dr Ane Johannessen, in commissioning and writing a fascinating series of papers, which we hope will be not just of interest, but also of great educational value to the *Breathe* readership.

Conflict of interest: B.D. Kent has participated in advisory boards and/or received speaker fees from AstraZeneca, Chiesi, GSK, Novartis, and Teva; has received educational travel bursaries from Boehringer Ingelheim, Chiesi, and Napp; and has received research funding from Itamar Medical.

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