Lancet Countdown paper: what does it mean for nephrology?

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“The Lancet Countdown: Tracking Progress on Health and Climate Change’ is an initiative established by The Lancet to provide an independent, global monitoring system dedicated to tracking the health dimensions of the impact of and the response to climate change. It tracks 41 indicators across five domains: climate change impacts, exposures and vulnerability; adaptation planning and resilience for health; mitigation actions and health co-benefits; economics and finance; and public and political engagement. The international report is the product of a collaboration between 27 leading academic institutions and United Nations and intergovernmental agencies from each continent. It draws on world-class expertise from climate scientists, ecologists, mathematicians, geographers, engineers, energy, food, livestock and transport experts, economists, social and political scientists, public health professionals and doctors.

The Lancet Countdown’s work builds on decades of research in this field; it was first proposed in the 2015 Lancet Commission, which documented the human impact of climate change and proposed 10 global recommendations to respond to this public health emergency and secure the public health benefits available.

Four key messages are conveyed in The Lancet Countdown 2018 report with principle findings summarized below [1].

- Present day changes in labour capacity, vector-borne disease and food security provide early warning of the compound and overwhelming effects to be expected if temperature continues to rise. Trends in climate change impacts, exposures and vulnerabilities demonstrate an unacceptably high level of risk for the current and future health of populations worldwide.
- The lack of progress in reducing emissions and building adaptive capacity threatens both human lives and the viability of the national health systems upon which they depend in addition to the potential to disrupt core public health infrastructure and overwhelm health services.
- Despite these delays, there are positive steps towards an era of low-carbon transition, and it is clear that the nature
and scale of the response to climate change will be the single most important factor in shaping the health of nations for centuries to come.

- Ensuring a widespread understanding of climate change as a central public health issue will be crucial to the delivery of a timely response, with the health profession beginning to rise to this challenge.

There are numerous other indications that the urgency of the situation in terms of climate change is appreciated. A notable example is the recent Intergovernmental Panel on Climate Change (IPCC) report (www.IPCC.ch), which calls for actions to limit the temperature rise to 1.5°C. The report indicates that many countries will not attain the ambitious goals set out in the Paris agreement, thus additional initiatives, which are summarized in headline statements, are essential [2]. Additionally, The Nobel Prize in Economic Sciences in 2018 was awarded to William Nordhaus for his work ‘integrating climate change into long-run macroeconomic analysis’. Climate changes may have devastating social and political effects on mankind. If governments maintain the status quo and fail to act, then millions of people will be forced into migration by the end of the century. There are numerous laudable government and non-government initiatives on a worldwide scale that aim to reduce environmental impact. A notable one is the recent court case that took place in the Netherlands. On 9 October 2018, The Hague Court of Appeal upheld the historic victory of the Urgenda Foundation and 886 Dutch citizens in their climate case against the Dutch Government. The Appeal Court affirmed that the Government must reduce emissions by at least 25% by 2020 compared with 1990 levels. Reductions of a lesser amount would be a violation of the rights of Dutch citizens as protected by the European Convention on Human Rights [3].

Is addressing climate change a problem exclusively for governments? Certainly not. The Headline Statement D7 of the IPCC report states: strengthening the capacities for climate action of national and sub-national authorities, civil society, the private sector, indigenous peoples and local communities can support the implementation of ambitious actions implied by limiting global warming to 1.5°C (high confidence). International cooperation can provide an enabling environment for this to be achieved in all countries and for all people, in the context of sustainable development [2].

What could be the role of medical professionals?

The fourth key message of the Lancet Countdown paper indicates that widespread public understanding is essential and that the health profession is only now beginning to rise to this challenge. It further calls for ‘profound changes in the methods of delivery of healthcare’. This must be interpreted as a call to the medical profession as a whole to act. The overall aim should be to substantially decrease the environmental impact of the healthcare sector, for instance by making it ‘carbon neutral’. It is inevitable that medical professionals will play an essential role in this process.

The medical centres related to universities are the medical educational/training and research institutes, but are also contributors to the environmental burden created by the healthcare sector. Medical professionals are the natural advocates to inform and educate the healthcare branch, society, policy makers and others on the effects of the changing environment on health and disease. They also play an essential role in defining, initiating and implementing activities to reduce the environmental burden.

The healthcare profession in particular needs to undertake initiatives to make patient care and medical research far more sustainable, that is, creating less burden to the environment is no longer optional, it is mandatory. In addition to action at an institutional level, for example, the installation of solar panels, low energy lighting and recycling waste, all aspects of healthcare including care pathways, procedures, interventions and outpatient clinics require to be evaluated with redesign and reorientation where possible and necessary. New knowledge within this field needs to be expanded, a task that typically falls to universities. To achieve this, all medical professionals—doctors, nurses and allied healthcare professionals—need to embrace this challenge and to collaborate. Many of the recent developments in information technology, data handling, analysis and presentation, are, at best, insufficiently utilized in healthcare institutions and, at worst, not utilized at all. In fact, many institutions are (far) behind in making use of the many technological opportunities. It is likely that by incorporating new information technologies into everyday clinical practice, substantial reduction in the environmental impact of healthcare can be achieved.

Sustainable healthcare education can be defined as teaching and learning activities that prepare future health professionals to promote sustainable health and deliver sustainable healthcare. The medical curriculum in academic centres needs to focus not only on learning how to cure disease and sustain health, but also on how to promote health with as little burden to society and resources as possible. This calls for considerable redesigning of the curriculum. In order for these changes to happen in a timely manner, the topic of sustainable health and healthcare needs to be integrated into the medical curriculum. Within the young generation, the need for structured information is clearly recognized. The International Federation of Medical Students’ Associations has launched an initiative to have climate-health included in all medical school curricula by 2020, with fuller integration by 2025 (https://goo.gl/forms/UM4cVye14hEspUOd2). We believe this is imperative and will provide health professionals with the vital information they need to further educate society about the connection between climate change and health.

Medical professionals also need to prioritize the topic of sustainable health and healthcare within their (inter)national medical societies, as ERA-EDTA did earlier in 2018 [4]. This will create awareness among the members and can create a platform for discussions between colleagues and allow them to share experiences. It may also facilitate interactions with pharmaceutical and medical device industries, and regulatory and policy-making bodies. The professional medical societies are often at the basis of the creation of guidelines. This can be an effective tool to make a change in care pathways, treatment strategies, etc. It is now the time for members to put this subject on the agenda in their hospitals, regions and countries.
The fourth key message of the *Lancet* Countdown indicates that widespread public understanding is necessary. We agree and see a great need for new initiatives that increase the awareness on this level. Such initiatives can be taken by central and/or local governments, but also by other bodies and institutions. Basically, the necessity to transform our society into a more sustainable one needs to be felt by all civilians. This asks for large campaigns informing the general public on which aspects of daily life result in environmental impact. Only then can strategies be effectively defined and implemented. Climate change will substantially impact future generations, thus we also urge that the subject of how to create and maintain a ‘sustainable society’ must be integrated within multiple levels of education. Currently, there is no structured education on this topic in Europe.

The *Lancet* Countdown paper is a sounding board for the medical community [1]. The medical field in general and we as professionals in particular need to meet the challenges it highlights. The concrete actions that can and should be taken by us as medical professionals and as ERA-EDTA were summarized earlier and are again shown in the Table 1 [4]. The Council has, as a first step, initiated discussion with big industries regarding how to collaborate to effect change. We, as a global community, face significant but not insurmountable challenges and we, as medical professionals, must rise to the occasion and not shirk our responsibilities. We need to think globally and act locally.

**CONFLICT OF INTEREST STATEMENT**

None declared.

**REFERENCES**


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**Table 1.**

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<th align="left">Actions to be undertaken by health professionals</th>
<th align="left">Actions to be undertaken by professional organizations such as the ERA-EDTA</th>
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<tbody>
<tr>
<td align="left">Encourage health facilities where you work to lead by example and adopt measures to reduce their climate footprint</td>
<td align="left">Create awareness with the members of the enormous challenges that we are facing by inviting experts to give presentations during meetings or publishing topic papers in journals of the society</td>
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<td align="left">Encourage professional associations to explore and to address the issue of climate change and the role the health sector can play in mitigation</td>
<td align="left">Translate the general goals formulated by global institutions, such as the World Health Organization and World Bank, into concrete actions within the specific medical field</td>
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<td align="left">Work with associations of health professionals and teaching institutions to make climate literacy a mandatory requirement for all (pre)clinical education programmes</td>
<td align="left">Initiate, support and/or provide a platform for initiatives and/or task forces addressing specific topics, for discussions with other stakeholders, in particular industries, but also policy makers, regulatory authorities, sister organizations, etc. on national and international levels</td>
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<tr>
<td align="left">Become an informed advocate for climate mitigation and adaption efforts</td>
<td align="left">Initiate, support and/or provide a platform for initiatives and/or task forces for identifying areas within the medical care that need attention most urgently, for instance because these are especially heavy contributors to greenhouse gas emissions, or because relatively simple actions could already have effect (low hanging fruit concept). Prioritize areas to be addressed</td>
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<td align="left">Set an example: do your part to understand and minimize your own climate footprint</td>
<td align="left">Initiate, support and/or provide a platform for initiatives and/or task forces for defining research questions on what the effect of climate change has on nephrology patients</td>
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<td align="left">Initiate, support and/or provide a platform for initiatives and/or task forces for defining educational tools/programmes, etc. to make sustainable healthcare education</td>
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<td align="left"></td>
<td align="left">Provide a platform for periodic reporting to the members, the general public and other stakeholders</td>
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<td align="left">Organize its meetings in a ‘green’ way</td>
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