

Frontiers Improve

Climate change, environmental sustainability and health care quality

HANS C. OSSEBAARD¹, and PETER LACHMAN²

¹National Health Care Institute, P.O. Box 320, 1110 AH Diemen, The Netherlands, and , and ²International Society for Quality in Healthcare, ISQua, Ireland

Address reprint requests to: Hans C Ossebaard, National Health Care Institute, Willem Dudokhof 1, 1112 ZA Diemen, The Netherlands. Tel: +31 (0)6 20 53 66 96; Fax: +31 (0)20 797 85 00; E-mail: hossebaard@zinl.nl

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Abstract

The challenges for health care continue to grow and in the 21st century healthcare policymakers and providers will need to respond to the developing impact of global warming and the environmental impact of healthcare service delivery. This cannot be viewed apart from the current Coronavirus disease (COVID-19) pandemic, which is likely to be linked to the climate crisis.

Key words: climate change, quality, ecology, health care, sustainability, COVID-19

In this paper, we consider the challenge for the healthcare sector in light of the recent International Society for Quality in Healthcare (ISQua) declaration on climate change. The aim of the paper is to highlight the urgency of the situation and the need for an integrated response to the issues, with some guidance on what can be done to lessen the impact and to plan for an eco-friendly healthcare system in which environmental sustainability is a new quality domain.

The challenge

Over the past number of years, the impact of climate change has become more apparent. Despite this, the response from healthcare and health policy has been minimal. Publications such as ‘Limits to Growth’ (1972) [1], the ‘Brundtland report’ (1987) [2], the ‘Kyoto protocol’ (1997) [3], ‘An Inconvenient Truth’ (2006) [4], the Paris Agreement (2016) [5] all raised the issue in the political arena and left traces in our memories.

There have been grass roots movements taking action on climate change worldwide. The question of climate change is gaining momentum now throughout the world. We hear and read about the UN Climate Change Conferences, the Intergovernmental Panel on Climate Change, the WHO, de European Academies—Science Advisory Council and other supranational bodies speaking out on the effects of global warming and the urgency for action. There is growing public discontent with national governments implementing mitigation and adaptation strategies, as we witness the wildfires from California to Australia, from Siberia to the Amazon and the floods in

Mozambique and other countries. The Coronavirus disease (COVID-19) pandemic is undeniably related to the climate crisis. We have known for some time that global warming is increasing the likelihood, the timing, the intensity and geography of zoonoses, epidemics and other public health threats via a web of intertwined causal pathways [6]. Factors such as globalization, population density, latitude, human behaviour, cultural habits, prosperity, land use, migration or conflict contribute to the prevalence and incidence of these infectious diseases that affect human health, animal health and environmental health. There is still much unknown or is ‘known unknown’.

The science is clear about this: because of anthropogenic global warming and pollution, we are in the midst of a climate emergency facing a massive ecological and humanitarian catastrophe that will by far exceed the current coronavirus crisis. Until recently, health and the healthcare sector have been low on the international climate agenda [7]. This is now rapidly changing, despite ongoing disinformation campaigns [8]. One reason for this is the mounting evidence for the impact on individual and population health. Since 2015, the independent Lancet Countdown initiative is collecting and summarizing literature from a range of scientific disciplines, undertaking new research, as well as publishing a set of indicators to monitor change [9].

Over the last 25 years there has been minimal global progress in reducing the emission of greenhouse gases of which carbon dioxide is the most important. Substantial investment has not been made to adapt our economies to future circumstances. Global warming, decreased biodiversity, water and air pollution are already causing

health problems and increasing mortality across the planet. These effects have presented themselves faster and more dramatically than expected, with most impact on the vulnerable and most disadvantaged people. This has resulted in increased mortality and incidence of climate-related zoonoses, heat stress, more asthma and allergies, with resultant loss of labour productivity. For the near future, we can anticipate increased cardiovascular and pulmonary diseases, as well as mental ill health, besides the health consequences of food insecurity, water shortage, climate migration or territorial conflict.

Our societies, and our healthcare systems, must respond to this challenge without being disrupted. In addition, the healthcare industry must examine its own carbon footprint, as it is in itself contributing to climate change through greenhouse gases emission, waste and pharmaceutical pollution. Climate change and its impact is the new public health challenge and has become a major determinant of health. The prevailing paradigm of medicine is challenged by what is called ‘the greatest threat to global health in the 21st century’ [10]. The global COVID-19 outbreak is only one example of this. Firstly, we must combat this crisis. Now it is time for health professionals to act decisively and collaborate for a transition in order to prevent its causes. Since climate change also presents ‘the greatest global opportunity of the 21st century’ this transition entails an opening for hopeful, innovative and positive action as well [11].

The ISQua response

Last October, at the 36th International Conference in Cape Town, South Africa, ISQua announced the publication of their official statement on the issue of sustainability in healthcare as related to quality, affordability and accessibility of health care [12]. This marked a historical and unique opportunity for the International Society to recognize the relationship between climate change, health and health care quality and act accordingly. Climate change can only be moderated by a series of global measures, the first of which is shifting away from global fossil-fuel dependency in order to reduce the emission of greenhouse gases. The healthcare sector could contribute substantially to this goal since its contribution to global carbon dioxide emission is estimated to be the equivalent of 514 coal plants; 4.4% of the global net emission [13]. High-resource countries generally pollute much more than low-resource countries.

Reduction of CO₂ is something which all economic sectors can do and should do, together with reducing waste, managing water, increasing energy efficiency, using clean energy sources, implementing green-ICT, arranging for lean management and other measures to achieve an improved ecological footprint of health care. But when it comes to the specifics of health care organization and delivery much more is possible. Eco-friendliness could indeed be perceived as a dimension of quality in health care practice.

What we can do in the healthcare sector

The first step that we must take is to move the climate crisis to the forefront of our quality improvement action by acknowledging that we are in a crisis, and that we need to include this when we address the challenges of quality in the delivery of health care. Reducing the environmental footprint of our work and improving sustainability can in fact be viewed as quality improvement activities. For instance, substituting the use of severely polluting anaesthetic gases in anaesthesiology with equally safe and effective intravenous drugs drastically reduces the footprint of the operating theatre [14].

The use of telemedicine in epilepsy care reduces travelling of patients and thereby substantially lowers carbon dioxide emission [15]. In nephrology, efforts are undertaken to reduce the use of energy and water in haemodialysis [16]. Decreasing the use of plastics, decreasing the use of water and energy are all within the realm of most facilities. Many more examples and best practices are there to promote circular work (‘reduce, reuse, recycle’) of disposables and medical devices or reduce pollution by medicines, thereby improving quality of care by improving its ecological footprint [17].

Promotion of health

The transition from curative medicine towards prevention, pre-care and health promotion implies de facto more sustainability. Individual lifestyle actions such as cycling instead of driving, eating less meat or wasting less food all contribute and provide an optimistic perspective for action. This is necessary since climate change frequently offers nothing more than a bleak outlook for the children of the world. Climate change and epidemics outbreaks belong to the ‘global commons’ and represent a public health issue that we must work on collaboratively as professionals in health care and health education [18]. Solutions are within reach, knowledge is present, and the required political will is growing.

In response to climate change, we are calling on all in the quality and safety movement to add environmental sustainability as a key quality domain with appropriate standards [19]. The ISQua External Evaluation Association and regulators must adopt the assessment of the environmental impact as a fundamental standard for external evaluation of health care facilities. We should also work to meet the demand for integrating this subject into curricula and educational courses for medical students as well as health care professionals [20].

One lesson of the COVID-19 pandemic is that the impact of globalization on the spread of the virus and on future pandemics, the lack of preparedness to respond to the threat and the resultant impact on environment must be considered. It is still early for us to distil the key lessons of the pandemic and its impact on the environment. We call for research into this aspect of the COVID-19 pandemic as well as in how to develop preventive measures for the future.

The health care quality improvement movement must adopt action on the environment as a core domain of quality and ensure that these common sense innovations can be adapted and implemented to improve health care and make the world a better place.

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