Sustainable Healthcare Policy Statement

Introduction

Significant advancements have been made in global health over the last century, with global under-five mortality lower and life expectancy at birth higher than ever before (1, 2). However, this progress has been achieved in part through unsustainable human activities at the expense of the environment (1).

A growing population, increasing demand for natural resources and high fossil fuel dependence are driving climate change, ocean acidification, deforestation, soil degradation, freshwater depletion and air pollution (1). This leads not only to direct injury and death, but the increased spread of vector and water-borne disease, cardiorespiratory disease, water and food insecurity, malnutrition and poor mental health outcomes (3).

Rising greenhouse gas emissions have warmed the average global surface temperature to over 1°C since pre-industrial times (4). With the last decade as the hottest on record (5), children born today may face a world over 4°C warmer if we do not alter our current trajectory (3). To keep global warming below 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) has explicitly stated the need to halve yearly global greenhouse gas emissions within the next 10 years and become carbon-neutral within the next 30 years (4).

Despite being the backbone of the response to the health impacts of climate change, healthcare systems are also part of the problem. The healthcare sector is responsible for 4.6% of global greenhouse gas emissions (3). This paradoxical dual burden means that increasing sustainability in health systems is essential to adequately address the health impacts of climate change.

Sustainable healthcare aims to improve health through efficient delivery of healthcare services that limit harm to the environment which sustains human health (6). The Sustainable Healthcare Education Network has prioritised three learning outcomes for healthcare workers (7):

1. “Describe how the environment and human health interact at different levels.

2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.

3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.” (7, p. 1)

This policy statement will provide an overview of these learning outcomes with subsequent calls to action towards achieving sustainable healthcare systems.
Human health and the environment

Human health and the environment are deeply interdependent. Ecosystems provide vital natural resources, food and water, as well as regulate extreme weather, prevent soil degradation, control the spread of infectious disease, and are integral to mental and spiritual wellbeing (1). Human activity is inextricably implicated in the development of climate change, ocean acidification, deforestation, soil degradation, freshwater depletion and air pollution (1).

High temperatures, heatwaves and wildfires can cause injury, heatstroke, dehydration, organ failure and death. Extreme heat can exacerbate cardiorespiratory diseases and has been associated with various forms of violence (8-13). Floods can lead to injury and death, as well as increase transmission of infectious disease (3). Droughts and floods have both contributed to water and food insecurity (14). Since the turn of the century, we have experienced 9 of the 10 most suitable years for the transmission of dengue (3). The unsustainable activities driving climate change also produces large amounts of air pollution, responsible for at least 7 million premature deaths per year (15). Climate change is also thought to exacerbate existing stressors. While no causal links can be drawn between such complex issues, the influence of climate change on human displacement and conflict is being increasingly explored (3, 16).

The health impacts of climate change are complex, cumulative and wide ranging. Furthermore, they are not experienced equally across the world. Climate change disproportionately affects marginalised and low socioeconomic status communities, worsening existing inequalities.

Figure 2: Health impacts of climate change (17)
Sustainable healthcare systems

An environmentally sustainable healthcare system is one which improves, maintains or restores health whilst minimising environmental impacts (6). Additionally, it will leverage opportunities to improve or restore the environment (6) to the benefit of future generations. Currently, healthcare systems consume a large amount of energy and resources and produce a lot of emissions and waste. There is gathering interest of the healthcare sector in environmental stewardship. There are three fundamental reasons for taking a more proactive stance (6):

1. Environmental sustainability interventions can tackle the upstream determinants of health
2. Environmental sustainability action can benefit patients, providers, the health workforce and minimise environmental health risk
3. Environmental sustainability can reduce costs and increase the resilience of health systems

One issue is medical excess, such as unnecessary tests, treatments and diagnoses (19). Harm is cause to the patient and scarce resources are used up. There is poor correlation in high-income countries of increased healthcare spending and improved healthcare outcomes. Therefore, there is a dual benefit to addressing unnecessary medical waste: harm to patients is prevented and environmental impact is minimised by using resources more effectively. Whilst this issue receives recognition in healthcare guidelines, implementation in practice in another matter. There is a need for research to address potential harm of interventions and for this to be communicated clearly with the public and other relevant stakeholders (19). Of relevance to healthcare workers, a greater push for the consideration of resource use is needed, with regard to financial and human resources.

Another issue is carbon emissions. Evidence indicates that the healthcare sector makes considerable contribution to carbon emissions. NHS England, for example, produced 22.8 MtCO2e in 2015 alone (20). Essentially, health systems contribute to climate change through their carbon emissions and in turn, the health effects of climate change will continue to put greater burden on health systems. Health systems therefore have an

World Health Organisation 7 key components of a sustainable hospital (18):

1) “Energy efficiency: Reduce hospital energy consumption and costs through efficiency and conservation measures
2) Green building design: Build hospitals that are responsive to local climate conditions and optimised for reduced energy and resource demands
3) Alternative energy generation: Produce and/or consume clean, renewable energy onsite to ensure reliable and resilient operation
4) Transport: Use alternative fuels for hospital vehicle fleets; encourage walking and cycling to the facility; promote staff, patient and community use of public transport; site health-care buildings to minimize the need for staff and patient transportation
5) Food: Provide sustainably grown local food for staff and patients
6) Waste: Reduce, re-use, recycle, compost; employ alternatives to waste incineration
7) Water: Conserve water; avoid bottled water when safe alternatives exist” (18, p. 3)
opportunity to lead in this area and promote the reduction of carbon emissions from a health perspective. This can be achieved by implementation of plans to cut air pollution and prioritizing low-carbon alternative at all operation levels, e.g. design, procurement of supplies and so forth (6).

To achieve sustainable healthcare systems, the health workforce must be mobilized. Change will not be achieved unless the health workforce of the present and future are engaged with efforts to do so. The workforce must be integrated into planning, design, implementation and management of environmental sustainability policy. This will require a degree of education so that workers understand the environmental impacts of current systems and so that they are prepared for the projected impacts of climate change (6).

The role of healthcare workers

Healthcare workers aim to improve, promote and safeguard human health. It is therefore counterintuitive that healthcare workers’ working environments are inadvertently contributing to the health impacts of climate change. Discourse surrounding the role of healthcare workers in the climate crisis is increasingly drawing upon the moral, ethical, and professional responsibilities of healthcare workers as advocates for health (21-30).

While clinical practice tends to focus on the individual patient and their immediate health needs, addressing the wider determinants of health requires approaches targeted further up-stream. The General Medical Council (GMC) in the UK mandate future doctors to recognise environmental determinants of health and advocate on behalf of their patients (31). As of 2018, the GMC requires medical graduates to apply the “principles, methods and knowledge” (31, p. 23) of sustainable healthcare to their clinical practice. As experienced communicators, leaders and critical thinkers, healthcare workers are considered well equipped for educating, advocating and taking action against the health impacts of climate change (7, 29).

Integrating sustainable healthcare education into curricula

With the GMC outlining the requirement for qualifying doctors in the UK to understand and apply the principles of sustainable healthcare to medical practice (31), it is evident that the need to deliver sustainable healthcare education is present. There is an abundance of research listing the reasons for including sustainable healthcare teaching in medical and other healthcare curricula, but little in the way of methods of implementation (32).

It is necessary that these concepts be introduced to students early on in their studies with an emphasis on clinical relevance to understand the importance of sustainability to healthcare (32). As it is often difficult to make space in curricula, it has been recommended to integrate sustainable healthcare not as its own topic but as a theme which cuts across other modules (32). There are a variety of ways this can be achieved; for instance, lectures, small group facilitated discussions on clinical scenarios, student selected components (SSC), essays or quality improvement projects on placements (32).
Whilst healthcare courses have a responsibility to deliver this teaching, a degree of responsibility falls on students too. Firstly, they play a key role in demanding institutional backing (32) and secondly, with an informed outlook, the onus is on them to advocate for change and implement sustainability in healthcare practice and healthcare systems.

**Conclusion**

Climate change is deemed this century’s largest threat to global health (33). Unsustainable health systems are undermining the significant progress being made in global health.

The potential of healthcare workers to improve human health should not be bound to local, national or even regional levels. Engaging in sustainable healthcare initiatives provide healthcare workers with the unique opportunity to act as global health practitioners and advocate on behalf of the health of current and future generations.

Sustainable health systems are central to achieving a fair and just world in which equity in health is a reality for all. Increased education, advocacy and collective action to support sustainable healthcare initiatives are needed to address the health impacts of climate change.

**Calls to action**

**SfGH Members**

- Healthcare students to consider individual sustainable initiatives (e.g. alternative, active or shared transport to placements)
- Feel empowered to start sustainable healthcare initiatives in local community, university and clinical placements (e.g. quality improvement projects)
- Support local sustainable healthcare campaigns
- Encourage discourse surrounding sustainable healthcare amongst colleagues

**SfGH Branches**

- Raise awareness and educate on sustainable healthcare at branch events
- Run one event dedicated to sustainable healthcare
- Identify local healthcare facility policies on sustainability and engage with initiatives to promote sustainable healthcare in local healthcare facilities
- Advocate for increased sustainable healthcare teaching in health degrees: 1) form a group of students 2) assess the existing curriculum 3) identify areas where sustainability could be integrated as a theme across modules 4) consider which methods of teaching would be most suitable (e.g. workshops, sustainable quality improvement projects) 5) meet with head of course to discuss increasing sustainable healthcare education in curriculum (32)
**SfGH National Committee**

- Support members and branches to include sustainable healthcare in events and short courses
- Provide one sustainable healthcare education training workshop at regional and national events per year
- Collaborate with affiliates such as Health Planet UK who also have a policy on increasing sustainable healthcare education (34)
- Collaborate with the Centre for Sustainable Healthcare and signpost members to their opportunities such as their training courses, masterclasses and scholarship programmes,
- Engage with IFMSA to expand sustainable healthcare policies internationally across other national member organisations
- Support and contribute initiatives to reduce NHS carbon emissions through the *Greener NHS* campaign (35)
- Encourage more research on sustainable healthcare education for all health degrees and non-clinical global health practitioners

**UK Government**

- Implement comprehensive sustainable healthcare initiatives into plans to meet emission targets
- Support the *Greener NHS* campaign (35)
- Support NHS procurement from companies with comprehensive sustainability plans
- Call for pharmaceutical companies to demonstrate sustainability policies

**References**


