The Lancet Countdown on Health and Climate Change

Policy Brief for Germany

2021
Overcoming and reducing the consequences of transgressed planetary boundaries are the global challenge of the 21st century. These consequences are already evident in the increased disease burden seen in almost all medical specialties.\textsuperscript{1} The COVID-19 pandemic and the floods in western Germany caused by extreme weather during the summer of 2021 show that health systems and societies need to strategically prepare for current and future challenges. No country or society in the world is immune to the health impacts of climate change.\textsuperscript{2} Therefore, the United Nations and the World Health Organization focus on "building back better, fairer and greener."\textsuperscript{3,4}

The recommendations of the first German Lancet Countdown Policy Brief 2019\textsuperscript{5} focused on essential elements of climate mitigation and adaptation. The Policy Brief for Germany 2021 now reviews their implementation. This review focuses on the three fields of action for which recommendations were formulated in 2019:

1. the systematic and comprehensive implementation of heat protection plans to reduce heat-related health risks,

2. the reduction of the carbon footprint of the German health sector, and

3. the integration of climate change and health / planetary health in the education and training of health professions.
What has been implemented?

In July and August 2021, semi-structured qualitative interviews were conducted by members of the German Alliance on Climate Change and Health (KLUG) in the three fields of action with key informants from the German health sector and beyond. Interviewees included representatives of the German Federal Ministry of Health, public health departments, the central association of local authorities, hospitals, statutory health insurance companies, welfare associations and non-governmental organizations, family doctors, experts in the field of occupational health and safety, medical law, teaching, nursing and health sciences as well as physiotherapy and psychology.

The objectives of the interviews were to:

• gain an overview of the implementation in progress and achieved regarding the recommendations provided in the policy brief for Germany in 2019

• specify required adjustments to the legal situation and existing regulatory frameworks;

• identify drivers and barriers for necessary transformation in each field of action and to infer the need for action especially in the course of the next two years.

The results were validated and prioritized through further semi-structured qualitative interviews in September 2021.

In summary: since the publication of the Lancet Policy Briefs for Germany of 2019, awareness on the health impacts of climate change among decision-makers and practitioners in all three areas has increased, however, substantial progress in implementing the recommendations is lacking. Even though discussions on heat health action plans and recommendations to implement them in Germany are longstanding, only a few municipalities have developed comprehensive and integrated heat health action plans or have implemented them, and in most cases have failed to fully engage stakeholders from the health sector. The health sector also falls short in making significant progress in reducing its carbon footprint, with very few exceptions. Processes to include climate change and health and planetary health, respectively, in education and training curricula of health professions have started. In the field of human medicine, the process is more advanced that in other subject areas where it is only just beginning.

In all three fields of action, responsibilities for decisions, coordination and action remain unclear. In addition, the respective regulatory frameworks do not provide precise aims and guidelines to appropriately prioritize climate change mitigation and adaptation measures. This policy brief reviews the progress of the past two years. Its findings result in an urgent need for action in the next two years in Germany, where effects of and responds to climate change effects are already visible.
1. Implementation of heat action plans to protect health

Current analyses and reports show that health risks from heat have continued to increase in Germany. Forecasts predict a further increase in heat waves or very hot days with a simultaneous increase in vulnerable population groups, with demographic changes and urbanization playing a central role.

Awareness of the need for consistent heat protection has increased among decision makers and in the population, also as a result of the Lancet Policy Brief recommendations for Germany in 2019. The 2017 federal recommendations for action and the current evidence for effective heat prevention is widely known. More information and education is available, as well as concrete guidance on how to develop and implement a heat health action plan for cities and municipalities.

The analysis of the interviews, as well as previous analyses, revealed three key dimensions that were confirmed in a validation with further experts in the field of heat prevention in September 2021. According to these, effective heat protection is based on:

1. the prerequisite that relevant authorities and involved stakeholders understand the importance of heat-related health protection and recognize the associated tasks as their binding duty;
2. the development, planning and implementation of heat protection measures in cross-sectoral teams;
3. two parallel pillars based on different actors, namely: (i) preparing for and protecting during an acute heat situation for example through providing public health guidance for vulnerable groups including pregnant women, infants and young children, people over 65 years and those with some pre-existing health conditions; and (ii) strengthening medium- and long-term heat resilience in communities and institutions.

According to the experts’ assessments, only a few municipalities have implemented comprehensive and integrated heat health action plans, as shown by recent nationwide surveys. In most cases, stakeholders from the health sector have not been comprehensively involved in the development of the plans. This includes the medical and nursing professions, emergency services and clinics. However, this significantly limits their effectiveness in the event of a crisis. There are no action scenarios for exceptionally extreme and complex situations, as experienced in southern Europe and Canada in the summer of 2021. Nevertheless, there is a risk for exceptionally extreme weather events to also occur in Germany in the coming years. The Federal Republic of Germany is not equipped to deal with catastrophes caused by possible major heat waves. Building long-term heat resilience in cities, municipalities and health facilities is also starting far too slowly.

These findings result in an urgent need for action:

- Anchoring health-related heat protection in law is a prerequisite for prioritizing heat health action plans as a task at the state and municipal level and for ensuring appropriate resources.
- In particular, there is a need to clarify the responsibility for heat-related heat protection in state laws (analogous to fire and flood protection) to ensure a clear decision-making structure and coordination. The key role of the Public Health Service and the responsibility of civil protection and disaster management in heat waves need to be clearly stated.
- In parallel, it is urgently necessary to consider health-related heat protection in building as well as occupational health and safety laws.
- Heat health action plans should include action scenarios for exceptionally extreme and complex situations.
- To monitor and register heat-related mortality and morbidity at the state and local levels, it is necessary to provide and strengthen appropriate structures.

The provisioning of data is essential for the development of indicators that measure health effects of heat. Consistency of these indicators for Germany with corresponding national, European and global ones such as those of the Lancet Countdown on Health and Climate Change would improve the comparability of these heat-related health effects and their development over time.
2. Reduction of the CO$_2$ footprint of the German healthcare sector

To meet the Paris climate targets, global greenhouse gas (GHG) emissions must begin to decline this decade and reach net zero by 2050 at the latest. The German healthcare sector produces five percent of the national GHG emissions.

The analysis of the status quo of the healthcare sector revealed four dimensions that are crucial for a significant reduction of its carbon footprint:

1. Societal pressure has achieved some progress in problem perception among decision-makers in the health sector. However, they do not yet take sufficient responsibility for implementing appropriate climate action.

2. Developing, planning, and implementing climate protection measures requires interdisciplinary expertise.

3. So far, there is no obligation for standardized reporting of GHG emissions in the healthcare sector. Only a few healthcare facilities voluntarily report their GHG emissions.

4. The political and legal regulatory framework does not sufficiently promote climate protection measures and does not demand them from healthcare facilities.

The urgency and responsibility for climate action in health care facilities are not yet widely accepted by self-governing structures, legislative and executive branches at the federal, state and local levels. For example, state governments do not yet sufficiently link the allocation of funding to compliance with ambitious sustainability criteria. No legislative proposals at the state, federal or European level aimed at reducing the carbon footprint of the healthcare sector. It also remains unclear how the European Green Deal will be reflected by future commission rules and directives, and at the level of EU member states.

Although climate managers are crucial in developing, planning and implementing climate action through expertise and networking across facilities, only about 10 percent of inpatient facilities voluntarily participate in civil society initiatives to train climate managers. Another barrier is the COVID-19 pandemic which has had to draw heavily on financial and human resources especially in the first year of crisis management. The findings emphasize an urgent need for action over the next two years:

- Through clear positioning, medical societies, hospital associations, federal and state medical associations should enhance the awareness for the urgency of action and in this way mobilize existing resources for climate protection measures.

- Existing concepts for climate neutrality in healthcare facilities can be used to develop minimum targets, and corresponding human resources have to be hired for implementation.

- Healthcare facilities have to be encouraged to report progress in reducing their carbon footprint.

- The federal and state governments are requested to provide appropriate funding for climate protection investments; it is also necessary to accelerate the relevant approval processes.

- The new federal government could initiate a fundamental legal structural process: in a multi-stakeholder process, system-relevant healthcare stakeholders can contribute to identifying legal barriers to climate-neutral healthcare and reducing them in the next step.

Internationally available reporting methods allow national and international comparisons as well as the presentation of own progress. Relevant indicators are the number of healthcare facilities committed to the goal of climate neutrality as well as an increase in the accounting of GHG emissions by the facilities themselves.
3. Integration of Planetary Health into the education of health professionals

Changing environmental conditions and their immense impact on health require health professionals to understand the magnitude of the planetary crisis and their role in the transformation process towards healthy and sustainable societies.

The 2019 Lancet Policy Brief recommended integrating the impacts of climate change on health and the health opportunities of climate action and the holistic concept of Planetary Health into the curricula for all health professions.

Since 2019, a growing number of lecturers and associations have been sensitized to the connection between climate change and health. Teaching initiatives in the form of pilot projects have been developed at several faculties, but mostly been driven by individual initiatives and have thus not yet been sustainably implemented.

The structure of the curricula of various health care professions and the processes of integrating the topic vary in detail. Expert interviews in the fields of medicine, nursing, physiotherapy, and psychology revealed the following common key dimensions as prerequisites for transformative planetary health teaching:

1. transition from individual, local initiatives to comprehensive education, training and continuous education by integrating teaching content on climate change and health / planetary health in the mandatory curricula;
2. strengthening specific expertise among lecturers and within institutions in order to be able to offer high quality teaching in the field of planetary health;
3. improvement of the quality of teaching with the aim of a practice-oriented and transformative education that empowers health professionals to act as change agents.

According to the experts' assessments, there is still considerable room for improvement concerning scaling up initiatives as well with regards to quality improvement.

In medical education, the topic was recently implemented in the national curriculum called NKLM 2.0, which will be the core curriculum of medical studies in the future. While Planetary Health is not included as a stand-alone topic in the mandatory part of the NKLM, it can be found in the form of practice examples across other thematic fields.

In other fields, this process is only just beginning or has yet to start. For nursing, psychology and physiotherapy, there are currently multiple windows of opportunity for revising the curricula and examination regulations that could be used.

In continuous medical education, there are some positive developments regarding the integration of climate change and health. In May 2021, the 124th General Assembly of the German Medical Association approved the inclusion of climate change and health in the general part of the 2018 residency curriculum, which should be implemented at state level. With regards to continuous medical education, a new module "Applied Environmental Medicine" has been established; in addition, medical assistants can complete a model curriculum on "Climate Change and Health". In continuous education and training in nursing, psychology and physiotherapy, there are currently no or only limited courses on climate change and health available in Germany.

The links between climate change and health are increasingly discussed at congresses and conferences of all health professions. This illustrates the growing interest of professional associations. As a result, a large number of health professionals increasingly get sensitized for the topic, which increases the need for further training options.
There is an urgent need for action in the coming one to two years:

- Teachers and learners should advocate for the integration of teaching content on climate change and health / planetary health into the mandatory part of curricula, continuous education guidelines and examination regulations of all health professions to ensure future-oriented teaching.

- When hiring new teaching staff for curriculum development, quality assurance and teaching, and prior knowledge in the field of Planetary Health should be considered, or additional training should be offered. Sufficient teaching materials and financial resources are needed for this.

- A consistently high quality of teaching, including the teaching of practical and transformative elements, should be ensured across the board and regularly evaluated.

Therefore, it is necessary to create incentives for quality improvement as well as to clarify responsibilities for progress review in and between the educational institutions.

Collecting data on the integration of climate change and health / planetary health in teaching and training, on scaling up programmes as well as on their quality, can contribute to better tracking and monitoring of developments in education. Available and comparable data could contribute to the development of higher quality teaching programs, especially where international comparisons are possible. An example of this is the Planetary Health Report Card from the USA.23

This policy brief reviews implementations of the Lancet Policy Brief recommendations for Germany in 2019 and serves as a basis for evidence-based decisions in policy and practice.
References


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THE LANCET COUNTDOWN

The Lancet Countdown: Tracking Progress on Health and Climate Change is a multi-disciplinary collaboration monitoring the links between health and climate change. It brings together lead researchers from 43 academic institutions and UN agencies in every continent, publishing annual updates of its findings to provide decision-makers with high-quality evidence-based recommendations. For its 2021 assessment, visit www.lancetcountdown.org/2021-report/

THE GERMAN MEDICAL ASSOCIATION (BUNDESÄRZTEKAMMER)

The German Medical Association (Bundesärztekammer) is the central organization in the system of medical self-administration in Germany. As the joint association of the State Chambers of Physicians (Landesärztekammern), it represents the interests of over 500,000 physicians in matters relating to professional policy, and plays an active role in opinion-forming processes with regard to health and social policy and in legislative procedures.

THE HELMHOLTZ ZENTRUM MÜNCHEN - GERMAN RESEARCH CENTER FOR ENVIRONMENTAL HEALTH

Helmholtz Zentrum München is a research center with the mission to discover personalized medical solutions for the prevention and therapy of environmentally-induced diseases and promote a healthier society in a rapidly changing world. It investigates important common diseases which develop from the interaction of lifestyle, environmental factors and personal genetic background, focusing particularly on diabetes mellitus, allergies and chronic lung diseases. Helmholtz Zentrum München is headquartered in Neuherberg in the north of Munich and has about 2,500 staff members. It is a member of the Helmholtz Association, the largest scientific organization in Germany with more than 40,000 employees at 19 research centers.

CHARITÉ – UNIVERSITÄTSMEDIZIN BERLIN

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THE POTSDAM INSTITUTE FOR CLIMATE IMPACT RESEARCH (PIK)

The Potsdam Institute for Climate Impact Research (PIK) is one of the leading research institutions addressing relevant questions in the fields of global change, climate impacts and sustainable development. Natural and social scientists work closely together to generate interdisciplinary insights that provide a sound basis for decision-making for society, businesses and politics. PIK is a member of the Leibniz Association of professionals and doctors.