



Climate Change & Health: Heatwaves. Adapting is not Capitulating



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Date

18.Jun 2024

Location

Miramar Palace

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Spanish

Organising Committee



Description

Climate Change is one of the most pressing and far-reaching social and environmental challenges facing humanity. Globally, it influences different sectors and its impact can be seen most clearly in the health area.

The mortality rate and health burden associated to the climate change are steadily rising. The climate crisis can be said to be a health crisis, both due to its direct effects (heatwaves and cold spells, extreme weather events, flooding and droughts), and to the important indirect impacts that it causes (higher air pollution and levels of air-borne allergens, more frequent and intense fires, changes to the distribution of infectious disease vectors, reduced availability of water and food insecurity). Furthermore, the impacts of the climate emergency on social systems – climate displaced people, drop in work capacity, or poorer mental health – has to be taken into account and they all lead to greater pressure on health infrastructures and systems.

change has not created new diseases, but has rather heightened and redistributed the existing ones, which influences the health characteristics and conditions of a specific population. If we turn to inequalities, all populations are exposed to the negative health impacts of climate change, but there are circumstances that increase vulnerability – such as geographical location and socioeconomic inequalities – and which also lead to greater health inequalities. The impact is dramatically different depending on the socioeconomic level of the geographical area in question and, therefore, on the pre-existing health conditions of its population; it makes a key contribution to the general health conditions and to certain diseases becoming chronic, and we should, therefore, change our approach to protecting vulnerable populations. Particularly susceptible groups include old people, women and children, people on low incomes, those with chronic illnesses (including cardiovascular and pulmonary, obesity and neurological, renal diseases) or population groups, such as pregnant women and outdoor workers.

Adapting disease monitoring to climate change

The different impact on the different regions, on people with diverse socioeconomic levels and the possibility of adapting to the changes are going to be essential for populations to minimise the health impacts arising from global warming. Health impacts in very built-up environments, for example, can be aggravated, particularly, by the larger existing socioeconomic differences, inadequate living conditions, and the greater exposure to air pollutants.

The main problem we are facing is that our disease monitoring systems are still pending specialisation in order to be able to quantify the causes associated to the impacts of climate change and to attribute them correctly. Early warning and watch systems integrating all the impacts stemming from climate change that affect a single place simultaneously need to be implemented. For example, in the summer of 2022, there was a record level of burnt area in our country; however, there is no epidemiological system quantifying the associated health impacts, not only of short-term flare ups of respiratory problems, but also, in the long term, of the worsening of cardiovascular diseases or of associated mental illnesses, such as post-traumatic stress, anxiety, depression, treatment adherence, etc.

The relevant authorities are responsible for putting the necessary mitigation and adaptation measures in place to avoid climate risks having a greater impact on the vulnerable population. Furthermore, those risks have to be managed properly to minimise the health effects. The adaptation measures include designing the implementation of local prevention plans adapted to each geographical areas based on their sociodemographic characteristics, and conducting local risk assessments. Such prevention plans, as the WHO has indicated, must be based on the temperature-mortality relationship.

Heatwaves and Prevention Plans in Public Health.

In Spain, there are currently two demographic information systems in the State administration about the risk that extremely high temperatures mean. The first – and historically older – is the information supplied by the Spanish State Meteorological Agency (AEMET) on the exceedances of the daily maximum temperature that occurred over the 95 percentile of the historical series of the maximum temperatures of the summer months; in other words, the definition of a heatwave in meteorology. Therefore, it is a definition based exclusively on the climatology of each place.

On the other hand, the impact of heatwaves on health are determined by means of epidemiological studies and refer to that daily maximum temperature from where the daily mortality rate increases in a statistically significant way. This daily maximum temperature is a percentile in the series of daily maximum temperature in summer months that sometimes coincide with the 95 percentile and at other times do not.

Therefore, the information differs depending on distinct concepts: the first system is climatology and the second refers to a health indicator such as mortality that is influenced by the socioeconomic, demographic and health characteristics of each place.

Determining the 95 percentile of a series of temperatures at methodological level is immediately achieved with any statistical programme. Defining the heatwave temperature in health is a more complex process as it depends on several factors associated to the sociodemographic population and structure of each geographic area – in other words, whether it is an older population, with a better health care system; whether it is a more rural or more urban territory – or it depends on its economic level, its heat acclimatization level or on its mechanisms to deal with the higher temperatures. Therefore, it is not a fixed temperature percentile, but rather one that varies according to the aforementioned population characteristics.

The Spanish Health Ministry, with the scientific and technical support of the Carlos III Health Institute, determines these temperatures for each province and they act as the basis for the High Temperature [Response Plan](#) that has been activated each summer since 2004. Given the obvious need to unify those thresholds and for that information to be properly passed to the population and authorities whose remit include health (civil protection, health care, health workers, companies with outdoor workers, schools, vulnerable groups such as pregnant women, people with co-morbidities, etc.), the Heat Plan with the 182 specific heatwave thresholds by isoclimatic areas statewide will be operational for the first time in the summer 2024 and will be activated on 3 June. (<https://www.sanidad.gob.es/areas/sanidadAmbiental/riesgosAmbientales/temperaturasExtremas/planAltasTemperaturas/home.htm>).

This plan uses the *Meteoalerta* [Weather Alert] areas previously defined by the Spanish State Meteorological Agency (AEMET) in its regionalisation of the whole of the state territory (geographical areas consisting of uniform territorial areas according to the climate performance of different meteorological variables, contained within a same province for weather forecasting purposes. The aim is to improve the specificity of the alerts from the point of view of managing public health. First, regarding the number of alerts generated and, second, as regards, the resulting impact. (<https://enveurope.springeropen.com/articles/10.1186/s12302-024-00917-6>).

The high temperature response plans in place statewide since 2004 have been shown to be effective as regards the impact on the population's health; the attributable mortality risk has dropped from 14% to roughly 2%, which is particularly important for highly vulnerable groups: old people and those with an underlying condition (diabetes, obesity, high blood pressure or with neurodegenerative diseases). In an area such as southern Europe where the extreme weather phenomena such as heatwaves are intensifying every summer, implementing measures that improve the running such plans within the context of population adaptation is of great interest. Working at local level is fundamental to adapt to the varied sociodemographic characteristics of the population and to conduct risk assessments of the effects of climate change at local level as regards health factors of the population. Designing and developing integrated plans, that address the synergic impacts on health of different environmental factors that foster the impacts of climate change (air pollution, dust intrusions, drought, forest fires, etc.) – instead of an individual approach – is fundamental; along with bolstering the health system and infrastructures so that they are resilient to the effects of the climate crisis and can continue to provide health services to the population even at critical moments.

Program

18-06-2024

18:00 - 19:00

“Cambio Climático y Salud: Olas de calor. Adaptarse no es rendirse“

Cristina Linares Gil | Unidad de Referencia en Cambio Climático, Salud y Medio Ambiente Urbano. Instituto de Salud Carlos III - Codirectora científica del Observatorio en Cambio Climático, Salud y Medio Ambiente Urbano.

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Eva Caballero kazetariak hizlariekin solasean arituko da hitzaldia amaitu ondoren / La periodista Eva Caballero moderará un coloquio con los ponentes una vez finalizada la conferencia

Teachers



Cristina Linares Gil

Scientific co-director of the Observatory on Climate Change, Health and Urban Environment. Carlos III Institute

Cristina Linares Gil es Doctora en Medicina Preventiva y Salud Pública por la Universidad Autónoma de Madrid. Actualmente desarrolla su actividad profesional como Científica Titular y Codirectora de la Unidad de Referencia en Cambio Climático, Salud y Medio Ambiente Urbano en el Instituto de Salud Carlos III. Forma parte del Grupo de Trabajo II del VI Informe de Evaluación del IPCC en el campo de "Impactos del Cambio Climático en la Salud Humana"; ha sido Lead Author del capítulo sobre Salud y Cambio Climático de la Red "Mediterranean Experts on Climate and Environmental Change" que ha recibido el Premio Norte Sur del Consejo de Europa 2020; autora en informes científico-técnicos de Naciones Unidas (UN Environment) y la Organización Mundial de la Salud. Ha sido Coordinadora del Grupo de Expertos en la primera Asamblea Ciudadana por el Clima de España, que ha recibido el Premio Nacional Extraordinario de Medio Ambiente en 2022 por el MITERD. En 2023, ha recibido el "II Premio Escarabajo Verde" de RTVE a la personalidad científica en materia medioambiental.



Julio Díaz Jiménez

Scientific Director of the Climate Change, Health and Urban Environment Observatory. Carlos III Health Institute

Doctor en Ciencias Físicas por la Universidad Complutense de Madrid en la especialidad de Física de la Tierra y el Cosmos. Científico titular del Instituto de Salud Carlos III y jefe del área del Departamento de Epidemiología y Bioestadística de la Escuela Nacional de Sanidad. Lleva más de 25 años dedicado a la investigación en medio ambiente y salud, en especial en temas relacionados con los efectos en salud de la contaminación química y acústica así como en temperaturas extremas. En estas materias ha realizado más de 200 publicaciones. Actualmente es colaborador de la OMS y del Ministerio de Sanidad español en temas relacionados con cambio climático, extremos térmicos y sus impactos en salud.

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Place

Miramar Palace

Pº de Miraconcha nº 48. Donostia / San Sebastián

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