

Concept Clearance

Branch: PHB

Council Period: 202605

Concept Title: HEW Research Coordination and Data Resource Center

Point of Contact: Quinn, Ashlinn

Introduction

NIH has established the Health and Extreme Weather (HEW) Program to better understand the direct and indirect impacts of extreme weather on the health of communities across America. This combined concept comprising a set of Research Hubs, coordinated with a Research Coordinating Center and a Data Resource Center, will address knowledge gaps and provide information that can be used for prevention, preparedness, and solutions to save lives and improve quality of life for those affected by extreme weather conditions and emerging environmental harms.

The NIH will solicit applications for a Research Coordination and Data Resource Center that will provide infrastructure support for the HEW Program including its Research Hubs, other NIH-funded research projects that fall within HEW's scope, and the broader Community of Practice (CoP) that is conducting HEW related-research.

Research Goals and Scope

The Center's Research Coordinating Component (RCC) will facilitate engagement across the network of HEW grantees and the larger CoP by sharing best practices, creating training and educational resources, organizing working groups and larger meetings, and otherwise disseminating information.

The RCC activities will be expected to include the following:

- Administration Functions (e.g., organizing meetings and other interactions between the HEW grantees and with the larger HEW CoP);
- Dissemination Functions (e.g., Developing a web presence for the network, Collecting and disseminating information with the network and the CoP); and
- Partnership Functions (e.g., Coordinating Research Hub Pilot Project efforts and developing cross-network collaboration opportunities).

The Center's Data Resource Component (DRC) will identify data-related needs in the CoP, provide training to address these needs, support sharing and linking of health and environmental data, and collaborate with other NIH data initiatives to reduce duplication, advance data science, and promote the use of data standards and harmonization.

The DRC will provide data infrastructure support for the HEW Network (including the RCC and Research Hubs), and as resources permit, NIH-funded and other researchers in the larger HEW CoP.

DRC activities will be expected to serve the following goals:

- Facilitating access to HEW data;
- Supporting health researchers with use and interpretation of environmental exposure data;
- Assisting NIH and the CoP in developing data interoperability, standards, and governance; and
- Providing training and user support for data manipulation and analysis.

Mechanism and Justification

Health and Extreme Weather is a relatively new and growing area of science at NIH. In addition to the extramural awards that have and will be supported by the Program, there is an extant HEW Community of Practice over 3000 members strong. A program of this size and scope requires coordination to ensure that disparate award recipients have opportunities to connect with each other to share best practices and cutting-edge science advances, to build new scientific collaborations, and to collectively build scientific capacity to conduct research that serves public health needs. In addition to overall program coordination, data-related needs are a recognized priority across NIH, and many ongoing NIH efforts are focused on structures and pathways for data harmonization, standardization, and governance, while protecting individual privacy. The field of Health and Extreme Weather brings a new dimension to the overall NIH data landscape with the need to consider incorporation of large and complex environmental, geospatial, and meteorological datasets. Such data-intensive efforts should ideally be conducted in a harmonized way, with best practices developed and widely shared, to accelerate discovery while avoiding unnecessary duplication of effort.

By providing overall coordination of the extramural Program and by integrating HEW data-related efforts with other NIH-wide efforts to build capacity for data harmonization, integration, and standardization, the Research Coordinating and Data Resource Center is a keystone investment that will enable the Health and Extreme Weather program to accelerate science to protect human health from the impacts of weather-related exposures.

Concept Clearance

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Concept Title: HEW Research Hubs

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Introduction

NIH has established the Health and Extreme Weather (HEW) Program to better understand the direct and indirect impacts of extreme weather on the health of communities across America. This combined concept comprising a set of Research Hubs, coordinated with a Research Coordinating Center and a Data Resource Center, will address knowledge gaps and provide information that can be used for prevention, preparedness, and solutions to save lives and improve quality of life for those affected by extreme weather conditions and emerging environmental harms.

Solutions-focused Research Hubs:

NIH will solicit applications for translational, solutions-focused, HEW Research Hubs consisting of multiple highly integrated components focused on research, capacity building, and community/public health translation. These hubs will focus on regionally relevant exposures and populations at heightened risk for adverse health outcomes as a result of exposure to extreme weather events.

The intention is for the HEW Research Hubs to be awarded to institutions in different regions of the United States, focused on the weather-related risks relevant to the region.

Research Goals and Scope

Each solutions-focused research hub is expected to:

1. Support impactful and innovative research focused on HEW prioritized areas to expand the evidence base for the health effects of extreme weather in various geographies, environments, and communities;
2. Conduct translational research, with the long-term goal to integrate effective and generalizable solutions for weather-related stressors into public health preparedness, response, and recovery and resilience efforts, as well as clinical care and treatment;
3. Expand interdisciplinary research capacity of researchers from across health, social, physical, engineering, environmental, earth, planetary, and other sciences to address the for broad dimensions
4. Cultivate and maintain authentic partnerships to meaningfully engage affected communities during all stages of solutions-focused research;
5. Closely collaborate with the Health and Extreme Weather (HEW) Research Coordination and Data Resource Centers and other members of the HEW Community of Practice (CoP), including participation in efforts to develop and promote accessible data resources, shared metrics and standards, approaches for data harmonization and integration, and training/capacity building across the HEW CoP and the wider research community.

Each hub will be expected to include an Administrative & Data Management Core, Training and Development Core, Community Engagement Core, two Research Projects, and up to two additional optional Cores.

Mechanism and Justification

Although the HEW Program has been successful in expanding the number of NIH-funded projects in this area of science (for example, through the 21 P20 Centers that will be coming to the end of their project terms in FY2027; and the CAFE Research Coordinating Center that

will similarly come to the end of its term soon), there is still relatively less focus on solutions (e.g. interventions and disease prevention strategies) to reduce the health impacts of extreme weather. Such solutions are critically needed to protect public health from the adverse impacts of weather-related events and exposures in the coming years.

Investment in the HEW Research Hubs will be expected to result in the following impacts critical to the achievement of overall HEW Program goals: generation of actionable evidence linking extreme weather exposures to health outcomes; development and evaluation of interventions and strategies to reduce risk and improve resilience; strengthened transdisciplinary research capacity in this area of science; translation of research into public health practice, policy and systems-level change; and sustained, meaningful partnerships with affected communities.