

Science is Essential to Public Health



WHY SCIENCE SUPPORT IS NEEDED NOW

It has never been more evident how critical public health is to the well-being and prosperity of the U.S. and entire global community. The COVID-19 pandemic has cost the U.S. hundreds of thousands of lives and by some estimates close to one-year GDP in just its first eight months. Long-term repercussions in the health and economic sectors are likely to last for years. Time after time, scientists have leapt to the task of doing the hard work to research, test and develop solutions to public health threats. Understanding and discovering solutions to these issues are in a large part thanks to the work of scientists. Science is a critical line of defense and offense in the fight for healthy, safe communities for all. Supporting science now and for the next challenge is critical for a healthy future.

A diverse, equitable and inclusive scientific workforce protects public health.



The response to global issues, such as COVID-19, brings together scientists from all walks of life, representing various nationalities, religions, races, ethnicities, genders, sexual orientations, and socioeconomic backgrounds. Solutions to complex, worldwide problems, like pandemics, require a diversity of perspectives and approaches. Without support for increasing diversity in STEM, these solutions will be undercut.



The U.S. is currently facing a skilled worker shortage in the science and technology sectors, and without a new infusion of STEM-trained individuals, this shortage will worsen. The [Bureau of Labor Statistics](#) estimates that the U.S. economy will need a further one million more STEM professionals by 2030.

Science helps in understanding and mitigating health risks to vulnerable communities.



The climate crisis is harming the [mental health and well-being](#) of individuals and communities. The acute impacts of climate-influenced disasters and the chronic impacts of extreme heat and climate-related environmental changes are causing psychological distress to communities across the globe. Support for science will help us understand the effects of a changing climate crucial for identifying vulnerable populations, potential health risks and preparing for future challenges.



Higher temperatures can lead to [increased allergens and pollutants](#) in the air, which can exacerbate asthma and allergies. Air quality issues are more likely to disproportionately affect the young, the poor and those with compromised immune systems.

The value of science for public health requires robust investment.



Climate change can affect [human health](#) in myriad ways: by intensifying heat waves, floods and other extreme weather events; by degrading air quality; and by increasing the risk of infectious disease emergence and spread. Increased and continuous funding is needed for research into how climate, pollution, hazards, ecosystems and agriculture shape human and ecological health in order to help ensure a sustainable future.



Actions to reduce carbon pollution and build climate resilience can improve public health, save lives, and generate hundreds of billions of dollars in [health-related economic benefits](#) each year by the end of the century.

OUR COMMITMENT

The American Geophysical Union (AGU) and its network of Earth and space scientists are committed to:

- Studying the natural world and its impacts on society
- Investigating ways to reduce any negative geophysical, ecological, societal and economic effects
- Helping create resilient communities and nations, especially the most vulnerable
- Educating the public