The Need for A New Approach for Responding to Chemical Exposure Caused by Community Wide Contamination

The Problem

When communities are exposed to environmental chemicals, the federal government's response relies on scientific evidence to prove that the health problems observed in the impacted community were caused by a particular chemical exposure. However, when these exposures occur, critical information required to prove causation – such as exact dose, exact duration of exposure, and the impact of exposure to multiple chemicals – is rarely available, or even known. As a result, the government often fails to take action to protect public health.

This failure stems from the lack of structured federal response capacity and inadequate scientific methods for investigating health outcomes related to exposures to toxic chemicals. Health investigations typically take years to complete and often result in an uncoordinated multi-agency investigation with little attention given to the specific health concerns of directly impacted residents. Rarely do these investigations generate meaningful action to protect communities.

The Solution

We propose a response model based on **presumptive association** that would allow government to act in the absence of community-specific data linking cause and effect after community-wide chemical exposures.

In this model, impacted community members would not have to prove that the chemical exposure caused their health condition in order to receive healthcare or other remedies. They would only have to demonstrate that they:

1. Were present in the area at the time of exposure
2. Have a diagnosis of a medical condition that is associated with exposure to the chemical of concern

How it Would Work

When a community is exposed to a chemical of concern, federal agencies would review scientific information about the health effects of exposure to that chemical. If the evidence indicates the chemical could cause a certain medical condition(s), then the government would take action to benefit community members who were exposed and who have that condition(s). These community members would not have to prove that their medical condition was caused by exposure to the chemical of concern. Adopting a presumptive association model for federal responses to chemical exposures would create a clear, fair, standardized, and timely approach that protects public health.

The Federal Government has Done this Before

The government has previously recognized that critical scientific information linking cause and effect is often missing or incomplete, and it has used a presumptive association approach to protect impacted populations and communities.

The Radiation Exposure Compensation Act

The Radiation Exposure Compensation Act (RECA) of 1990 provides compensation to people who develop illnesses due to exposure to radiation from the government's atmospheric nuclear testing. People who live downwind of testing, participated onsite during a test, work in uranium mining, or were exposed to waste from the Manhattan Project are eligible for compensation if they have a diagnosis of an eligible disease or medical condition(s). They do not have to prove their condition was caused by exposure to this radiation. In 2025, Congress reauthorized and expanded RECA to increase the eligible geographic areas, the number of illnesses covered, and the amount of compensation available to eligible people.

9/11 Survivors and First Responders

After the September 11th attacks, the September 11th Victim Compensation Fund (and later the James Zadroga 9/11 Health and Compensation Act of 2010) provided compensation and medical care for people who were survivors or took part in cleanup efforts. They do not have to prove that their presence at an attack site caused their illness or injury in order to receive assistance. They simply have to prove that they were present at an attack site, that they were a survivor or first responder, and that they have an illness or injury that the government presumes could be caused by chemicals at the site.

Veterans Exposed to Agency Orange

The U.S. military used Agent Orange as a defoliant during the Vietnam War which contained high levels of dioxin, a highly toxic chemical known to cause cancers, birth defects, neurodevelopmental disorders, and other chronic medical conditions. After the war, many veterans began reporting serious health problems or had children born with birth defects that they suspected were caused by Agent Orange. In 1979, Vietnam veterans filed a lawsuit which resulted in Agent Orange manufacturers setting up a fund, run by the Veterans Administration (VA), to provide veterans with compensation and social services. Veterans only had to show proof of service in Vietnam and a medical diagnosis of at least one of a list of qualifying diseases or medical conditions established by a committee of the Institute of Medicine. In the absence of scientific knowledge linking cause and effect, the VA chose to use a presumption of service connection for that disease.

Contaminated Drinking Water at Camp Lejeune, North Carolina

In 1982, two water treatment plants supplying drinking water to the Camp Lejeune Marine Corps base in Jacksonville, North Carolina were discovered to be contaminated with toxic chemicals. The contaminated wells were shut down in 1985, but a government investigation determined that the drinking water was contaminated as far back as the 1950s. The Honoring America's Veterans and Caring for Camp Lejeune Families Act of 2012 provides free healthcare to veterans and their families who lived there between 1953 and 1987 and have a qualifying medical condition without having to prove that this condition was caused by drinking the contaminated water.

Toxic Emissions from Burn Pits

In Middle Eastern combat zones following the September 11th attacks, it was common for the U.S. military to dispose of waste, chemicals, and other materials via open-air combustion commonly known as burn pits. The smoke and fumes from the burn pits have since been linked to cancer. Under the Honoring our Promise to Address Comprehensive Toxics (PACT) Act of 2022, more than 20 medical conditions were presumed to be associated with burn pit exposure without regard to cause. To qualify for compensation and healthcare, veterans must show proof of service in one of these areas after September 11th and have one of the listed medical conditions.

CONCLUSION

When communities are exposed to toxic chemicals in the environment and subsequently develop adverse medical conditions, government action is limited unless there is proof that these medical conditions were caused by a specific chemical exposure. Because of

the many scientific uncertainties, critical scientific information required to make causal determinations is rarely available. As a result, the government has rarely adequately acted in communities impacted by area-wide contamination to protect public health. A presumptive association approach to toxic chemical exposures would provide the government with a way to make decisions, act, and protect public health in the face of significant scientific uncertainty. This approach would use existing scientific information to aid people who were (1) present at the time and place of chemical exposures and (2) subsequently developed medical conditions known or suspected to be associated with exposure to those chemicals. The government has previously recognized that critical scientific information is missing or incomplete making it necessary to make presumptions about exposure leading to health problems suffered by 9/11 survivors and first responders, veterans exposed to Agent Orange in Vietnam, Marines exposed to contaminated drinking water at Camp Lejeune, soldiers exposed to emissions from burn pits and in other instances. Assisting those who fulfill these criteria without having to prove causation would create a clear, standardized government response to toxic chemical exposures and better protect public health in communities impacted by area-wide contamination.