

# Putting Prevention into Public Health Practice

**CDC is the leading public health agency in the nation, dedicated to protecting health and improving lives.**

CDC leads in two critical areas: 1) preventing, detecting, and responding to emerging health threats, and 2) transforming health research into action. From identifying and stopping the spread of a deadly hemorrhagic virus, to translating diabetes research to proven real-life prevention programs, CDC is at the forefront of implementing science and responding to threats. CDC collaborates closely with public health partners in communities across the nation and around the world to develop innovative strategies, share vital resources, and implement effective actions that address health challenges and promote a healthier nation.

## How CDC Protects Health:

**Emergency Response:** CDC works side-by-side with global, state, and local officials to prevent, detect, and respond to health threats. CDC invests in global and domestic foundational capabilities enabling jurisdictions to prepare for, respond to, and recover from public health emergencies. When needed, CDC also deploys world-class experts, whether the threat is a respiratory disease, natural disaster, chemical spill, or other emerging issue.

**Data to Action:** CDC is the national hub for the most comprehensive data systems, pinpointing health threats and driving action to combat them. Where are the latest overdose deaths happening, and by what means? Where are earliest signals of rising respiratory viruses or how many hospital beds are available? CDC has this critical data, and we are not only making it publicly available, but also acting on it faster than ever before.

**Investments & Resources:** CDC cannot tackle public health challenges alone. CDC deploys resources in communities to support a national public health network. About 80% of CDC's domestic funding is allocated to empower state and local partners across the nation. These partners use these vital resources to collect, analyze, and use local data to take actions that save lives in their communities. In many states, most of the prevention and public health funding comes directly from CDC. State, local, territorial, tribal, and federal partners rely on CDC resources and expertise to protect health where it matters most — at home.

**Cutting Edge Laboratories:** CDC labs are the go-to for the global community when no one else can identify a pathogen. For example, CDC conducts sequencing and confirmatory testing of the latest Avian flu cases to understand whether the virus is more likely to be transmitted from human to human — an important indicator of pandemic potential. Additionally, CDC enhances domestic diagnostic testing capacity by collaborating with private sector labs so the nation can rapidly scale up testing during emergencies.

**World Class Workforce:** Our experts — scientists, epidemiologists, medical officers, laboratorians, data scientists, and others — diligently monitor and analyze public health data to identify threats early. They develop and implement proven strategies to prevent and stop the spread of disease across the US and around the world. Available 24/7, our experts are on the front lines of public health — stopping Ebola and vaccine preventable diseases abroad — or preventing diabetes and combatting HIV/AIDS at home. CDC experts are often the first call when public health concerns arise — whether it is a state health official responding to a toxic train derailment or a foreign minister worried about an emerging outbreak. CDC's expertise is indispensable in safeguarding health worldwide.



CDC's Legacy:

## Over 75 Years of Improving Lives and Protecting Health

CDC works 24/7 to protect America from health, safety, and security threats. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC improves health and saves lives by fighting disease and supporting communities and citizens to do the same since the early years of its creation.

CDC has implemented lessons learned over countless responses but continues to require funding and policy support from Congress to make sure the nation is fully prepared for what comes next.

**1946 – Eliminating Malaria from the US:** Working closely with state and local health agencies of 13 southern states, CDC leveraged cutting-edge its science and people to eliminate malaria in the US. CDC built on this campaign to prevent, monitor, and support malaria elimination abroad, providing the foundations of CDC's core capabilities.

**1947 – Pioneering Chemical Disaster Response:** Following chemical explosions in Texas City, Texas, CDC jumped into action to provide medical assistance. Following the response, CDC was designated as the official response agency for future epidemics and disasters.

**1951 – Forming the Epidemic Intelligence Service:** Recognizing the need for a team of response-ready trained epidemiologists, CDC formed the Epidemic Intelligence Service (EIS) in 1951. EIS has since trained more than 4,000 disease detectives who have investigated and responded to chronic and infectious disease challenges and emergencies.

**1960 – National Health Survey Helps Understand US Burden of Disease:** CDC conducted the first National Health Examination Survey (now NHANES) to collect data on the amount, distribution, and effects of illness and disability in the US through interviews, clinical tests, physical examinations, and places where people receive healthcare.

**1961 – Expands Scope of Work in Chronic Disease:** CDC conducts first EIS investigation of a chronic disease, examining a cluster of acute leukemia in Illinois. This investigation paved the way for CDC's work in chronic disease prevention.

**1964 – Landmark Smoking Report Sparks Policy Change:** The Surgeon General's Report on Smoking and Health received media attention by establishing a link between smoking and diseases like lung cancer and bronchitis. Soon after, the predecessor to CDC's Office of Smoking and Health was created to support programs that reduce tobacco use.

**1971 – Toxic Lead Pollution Investigation Unveils Children's Health Risk:** CDC's investigation of childhood lead exposure associated with an ore smelter in El Paso, Texas, increased scientific understanding of how lead affects children's developing nerves and brains. These findings eventually led to the elimination of leaded gasoline in the US.

**1979 – Healthy People Maps a Better Future:** CDC published Healthy People: The Surgeon General's Report on Disease Prevention and Health Promotion in 1979, establishing the first set of ambitious, quantifiable goals for improving America's health.

**1981 – CDC Reports First Cases of AIDS:** First reported in CDC's flagship MMWR publication, the agency launched an investigative team to identify risk factors and a case definition for national surveillance for the disease.

**1989 – Partnerships for Preparedness:** CDC strengthened its capacity to respond to acts of bioterrorism, launching the Laboratory Response Network, a diverse network of domestic and international labs in partnership with CDC to provide the highest level of laboratory expertise and support during responses to both natural and man-made emergencies.

**1994 – Vaccines for Children Save Millions from Sickness, Trillions in Costs:** Established in 1994, the Vaccines for Children Program has provided over 74 million doses of vaccines to eligible children around the US. By 2023, this has prevented nearly 508 million illnesses, 1,129,000 childhood deaths, and \$2.7 trillion in societal costs.

**2001 – CDC Identifies First Bioterrorism-Related Case of Anthrax in the US:** Soon after the 9/11 terror attacks, CDC labs confirmed that a US man was infected by anthrax sent in the mail. CDC supported law enforcement to identify 22 anthrax cases connected to the domestic terror plot and used public health interventions to prevent more infections.

**2005 – CDC Deploys Public Health Workforce to Hurricane Katrina Response:** CDC and ATSDR deployed to four affected states. CDC provided support across jurisdictions for public health needs, including mental health services, injury prevention and control, laboratory support, and prevention of foodborne, waterborne, and vector-borne disease.

**2009 – CDC identifies the novel H1N1 influenza virus:** The H1N1 flu pandemic dominated CDC activity for the year and demonstrates CDC's unique capabilities for identifying and responding to novel influenza.

**2010 – CDC Haiti Response:** In the aftermath of the 7.0 magnitude earthquake in Haiti, CDC's response effort helps prevent 7,000 deaths from cholera.

**2014 – CDC Leads Multinational Response to Largest Ebola Outbreak in History:** CDC deployed over 1,400 health experts during its largest-ever field response to Guinea, Liberia, and Sierra Leone. Part of an interagency response, CDC staff contributed unique expertise in epidemiology, laboratory, infection prevention and control, community engagement, and more. CDC's expertise and coordination prevented Ebola's spread.

**2016 – Experts Across CDC Subject Areas Enabled Rapid Response to Zika Virus:** Upon detecting the spread of Zika to the Americas, CDC brought together its experts in mosquitos, birth defects, sexually transmitted diseases, and other areas to rapidly develop a strategy and guidance to prevent infections and Zika-related birth defects, including through what CDC newly identified as sexual transmission of the virus.

**2019 – Data Provides Helps Understand and Respond to Vaping-related Lung Injury:** During an outbreak of emerging e-cigarette/vaping product use-associated lung injury (EVALI), CDC worked with state health departments and the FDA to develop methods for searching emergency department data to monitor EVALI in near real-time, underscoring the strength of data to support new health threat investigations.

**2020 – Wastewater Surveillance Revolutionizes CDC Disease Tracking for COVID-19:** CDC invests COVID supplemental funding to create wastewater surveillance to identify disease trends, detect outbreaks early, and guide public health prevention and response activities. Wastewater also collects data for action on Flu, H5N1, RSV, and mpox.

**2022 – Rapid Detection and Action Defeats Ebola in the DRC:** CDC's work with the DRC Ministry of Health rapidly detected and defeated a 2022 Ebola virus outbreak in just 48 hours. In 2018, the same virus took nearly four months to detect and killed 2,200 people.

**2022 – Local CDC Preparedness Investments Help Detect First Case of Mpox:** CDC's investments in smallpox preparedness through the Public Health Emergency Preparedness program allowed the US to identify the first case of mpox, quickly alert other labs, and stand-up testing.

**2024 – CDC Data and Partnerships Turns the Tide on Overdose Deaths:** Since 2019, CDC's Overdose Data to Action program has awarded \$280M to 90 health departments each year to track and direct resources at stopping overdose deaths. This helped reduce OD deaths nationally by 16% from 2023 to 2024 – the first decline in five years.