



SUPPORT PUBLIC HEALTH LABORATORIES TO PROTECT OUR COMMUNITY'S HEALTH

What are public health laboratories?

Public health laboratories are on alert 24/7, testing and monitoring potential public health threats to protect our communities. They work at all levels of the government to detect infectious, food- and waterborne diseases, environmental exposures, genetic disorders in newborn babies and much more.

What makes public health laboratories unique?

Public health laboratories protect the health of the population at large, whereas hospital and commercial clinical laboratories support the treatment of individual patients.

How do public health laboratories protect me?



Every state, territory and the District of Columbia has its own public health laboratory system, as do many cities and counties.

Environmental Health

They test water, soil, air, food, manufactured products and specimens from people (such as blood and urine) for substances that could harm humans, animals or the environment. They help ensure private wells, public drinking water sources, beaches and recreational areas are safe, and identify harmful chemicals in people's bodies—such as lead and pesticides—so communities can remove the sources of contamination.

Emergency Response

They provide services to prepare for and respond to threats such as chemical, biological and radiological agents, natural disasters and infectious diseases.

Infectious Diseases

They conduct monitoring to detect new or re-emerging diseases, such as COVID-19, Ebola, Zika and seasonal flu.

Food Safety

They test clinical samples from people for foodborne illness cases to identify and stop outbreaks and conduct routine monitoring on human and animal food to identify harmful contaminants and adulterants.

Newborn Screening

They test newborns within days of birth for certain serious and potentially life-threatening conditions. This early detection can save an infant from a lifetime of severe disability or even death. Newborn screening is one of the US's largest and most successful disease prevention programs, with public health labs testing about 97% of all babies born in the country.



What is the role of the Association of Public Health Laboratories (APHL)?

APHL represents state and local governmental public health, environmental and agricultural laboratories in the United States. The association works to safeguard the public's health by strengthening laboratory systems around the world and provides an authoritative voice on laboratory-related public health issues.

Learn more at
[APHL.org/labs](https://www.aphl.org/labs)

CRITICAL GAPS IN PUBLIC HEALTH LABORATORY INFRASTRUCTURE RISK THE HEALTH OF THE PUBLIC



Prior to the COVID-19 response, public health laboratories were projected to receive **3% less federal funding support** in 2020 compared to 2002.



Slow data sharing can cause delayed detection and response, lost time, lost opportunities and **lost lives.**



30% of public health laboratory scientists **plan to leave the industry** within the next five years.

CHALLENGES

Funding

Public health laboratories are dramatically underfunded. As they are called upon to respond to new and complex threats, their ability to maintain equipment, develop new testing procedures, and perform outreach to critical partners—such as hospital laboratories and first responder communities—is proportionally curtailed and potentially compromised.

Data Modernization Needs

Public health laboratories often have to rely on antiquated data systems, such as faxes and spreadsheets to convey vital results to providers, epidemiologists and the CDC. They often lack the storage capacity, internet speeds and updated hardware to streamline specimen intake and reporting and make full use of these testing advances which are necessary for detecting and managing emerging and existing health threats.

Workforce

Public health laboratories face a critical shortage of laboratory scientists. They experience high staff turnover and difficulties hiring new staff at every level due to insufficient funding for positions, low salaries and competition from the private sector.

SOLUTIONS

Long term stable flexible funding through increased federal appropriations such as the Public Health Emergency Preparedness and the Epidemiology and Laboratory Capacity cooperative agreements, increasing the proportion of this funding directed to laboratories and investment from state and local governments are needed to make up for years of underinvestment, allowing laboratories to appropriately prepare for future threats.

Modernized laboratory informatics systems to communicate, analyze and store data, including electronic test order and results, are needed to empower public health labs to make real time data and analysis available. Positions and funding for specialized, dedicated laboratory bioinformaticians and IT specialists are necessary to manage these systems.

The public health laboratory system must be supported through investment in the workforce. Increased wages and investments in continuing education and leadership training would elevate the visibility and attractiveness of the profession, empowering public health laboratories to recruit, hire, and retain a highly qualified workforce.