



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™



Public Health Surveillance and Data

[Public Health Surveillance and Data Home](#)

Accelerating Data into Action

When people's lives are on the line, connected and integrated data helps us put the pieces together faster and take action to protect health.



With this priority, we're tapping into more data sources, promoting health equity, and increasing capacities for scalable outbreak response, forecasting, and predictive analytics.

Deeper insights

- **Health Equity:** We continue to bridge the gap between the data we have now and the data we need to fully understand and address the drivers of health disparities.
- **Data Linkage:** We're combining traditional surveillance data with non-traditional data, such as geospatial, social vulnerability, and administrative data, to uncover disease impacts.

Fast and secure connections

- **Interoperability:** We continue working toward shared data standards, such as FHIR®, that connect previously disconnected data systems and create hubs for rapid, bidirectional data exchange.
- **Privacy and Security:** We use new Privacy Preserving Record Linkage (PPRL) technology to keep personal information protected and to safely link and share health data.

Sharing more

- **Open Data:** We provide more data directly to the public and to researchers for faster insights on COVID-19, health equity and other priorities.
- **Common Operating Picture:** We build updated platforms that bring trusted, real-time data together in one place for easier analysis during an outbreak or other public health emergency.

Flexibility for the future

- **Scalable Emergency Response:** We increase the use of systems that can be rapidly scaled-up when needed, so that the same system can be used for 300 or 3 million cases.
- **Forecasting and Outbreak Analytics:** We launched a new National Center for Forecasting and Outbreak Analytics that will allow us to predict, inform, and innovate to fight any disease.

Projects and activities

Explore a few of the many projects and activities that are accelerating public health data into action.

Scalable outbreak response

CDC is expanding its platform for multiple respiratory illness surveillance in ways that will better prepare us for the next outbreak or pandemic.

- Read how we're delivering more [real-time data for emergencies](#)

Health equity

Effective public health means equitable public health. Data can help us get there.

- See how [DMI supports health equity](#)
- Read how we're creating [meaningful change for equitable data](#)
- Learn [3 ways we're making chronic disease data more equitable](#)

Open data

Public datasets like [data.cdc.gov](#) promote open government and transparency, research promotion, and efficiency.

- Read how we're [opening up health data for all](#)

Forecasting and Outbreak Analytics

Data modernization is critical to growing the nation's data, modeling, and analytics capabilities.

- Learn more about the [Center for Forecasting and Outbreak Analytics](#)

Advancing interoperability

CDC is working closely with partners to help public health data "speak the same language."

- See how DMI is [advancing interoperability for public health](#)
- Read how we're working with partners to solve the [puzzle of data access and exchange](#)

Innovation partnership

Collaboration drives cutting-edge solutions to get better, faster, complete, and accurate data to state and local public health and other partners.

- See how [CDC and USDS are innovating through partnership](#)

Data linkage

Linked data files enable researchers to examine factors that influence disability, chronic disease, health care utilization, morbidity, and mortality.


- Read how [linked data answers America's complex health questions](#)
- See [data linkage activities](#) at the National Center for Health Statistics

Novel approaches

Advanced tools like machine learning, artificial intelligence, and natural language processing are helping to solve complex public health problems.

- See how DMI is applying [artificial intelligence and machine learning](#)
- Read about the [novel approaches used for "nowcasting" suicide trends](#)

Protecting privacy

With [Privacy Preserving Record Linkage](#)  (PPRL), jurisdictions and others who report data can share information without providing personally identifying information to CDC or other parts of the federal government.

- See how PPRL is part of [transforming immunization data from end to end](#)

Common operating picture

HHS Protect offers a "common operating picture" where we can share data in near-real time.

- See how HHS Protect [provides a common operating picture for COVID-19](#)

Accelerating data into action: By the numbers



As of late 2021, PPRL had been used to securely track more than **86 million vaccine doses**.



As of October 2022, CDC had published **1.9 million** SARS-CoV-2 sequences with information available on CDC's [COVID Data Tracker](#).



More than 2.3 million users visited data.cdc.gov in the last year, meaning more scientists, researchers, and decision-makers are finding the data they need.



Through the Environmental Public Health Tracking Network members of the public now have access to finer [spatial resolution data](#) from **27 cancer registries**.

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