Vaccines & Immunizations

COVID-19 Vaccine Effectiveness Research

This page provides information for public health professionals and researchers. For information for the general public, please see Monitoring Vaccine Effectiveness

Clinical trials are conducted to determine vaccine efficacy before the U.S Food and Drug Administration (FDA) determines whether to approve a vaccine. CDC and other partners assess COVID-19 vaccine effectiveness under real-world conditions after the FDA approves a vaccine. This helps us understand if vaccines are performing as expected outside the more controlled setting of a clinical trial, which tests a vaccine before approval.

Below you'll find descriptions of current and planned vaccine effectiveness evaluations CDC is conducting with partners. The descriptions include the evaluation's data collection platform, protocol (if available), outcome, population, and participating sites. Links to protocols that detail the evaluation designs are included when possible.

The list of evaluations is organized by type of study. Choose a category below to see a description of those evaluation.

Vaccine Effectiveness Evaluations by Design

Select a study design below to get more information about the evaluation's name, population, outcome, protocol and participating sites:

Prospective Cohort

HEROES

Arizona Healthcare, Emergency Response, and Other Essential Workers Surveillance (AZ Heroes) Study

Outcome: Symptomatic and asymptomatic SARS-CoV-2 infections

Population: Healthcare providers/first responders/essential and other frontline workers

Participating Sites

- University of Arizona, Tucson, AZ
- Mel and Enid Zuckerman College of Public Health, Tucson, AZ

RECOVER

Research on the Epidemiology of SARS-CoV-2 in Essential Response Personnel (RECOVER)

Outcome: Symptomatic and asymptomatic SARS-CoV-2 infections

Population: Healthcare providers/first responders/essential and other frontline workers

Participating Sites

- Baylor Scott and White Health, Temple, TX

- Kaiser Permanente Northwest, Portland, OR
- St. Luke's Hospital, Duluth, MN
- University of Arizona, Tucson, AZ
- University of Miami, Miami, FL
- University of Utah, Salt Lake City, UT

PROTECT

Pediatric Research Observing Trends and Exposures in COVID-19 Timelines

Outcome: Symptomatic and asymptomatic SARS-CoV-2 infections

Population: Children aged <18 years

Participating Sites

- Baylor Scott and White Health, Temple, TX
- University of Arizona, Tucson, AZ
- University of Miami, Miami, FL
- University of Utah, Salt Lake City, UT

CASCADIA

Outcome: Symptomatic and asymptomatic SARS-CoV-2 infections

Population: Children aged <18 years and adults aged <50 years

Participating Sites

- Kaiser Permanente Northwest, Portland, OR
- University of Washington, Seattle, WA

Household Transmission Studies

HEROES-RECOVER Household Transmission Study

Research on the Epidemiology of SARS-CoV-2 in Essential Response Personnel (RECOVER) SARS-CoV-2 Household Transmission Study

Outcome: Transmission in households of healthcare, first responder, and essential and other frontline workers with SARS-CoV-2

Population: Households of infected healthcare providers/first responders/essential and other frontline workers

Participating Sites

- Baylor Scott and White Health, Temple, TX
- Kaiser Permanente Northwest, Portland, OR
- St. Luke's Hospital, St. Louis, MO
- University of Arizona, Tucson, AZ
- University of Miami, Miami, FL
- University of Utah, Salt Lake City, UT

RVTN (Respiratory Virus Transmission Network)

RVTN – Sentinel

Sentinel Protocol

Outcome: Household transmission among community members confirmed with SARS-CoV-2

Population: Households of community members with positive SARS-CoV-2 tests recruited from sentinel testing sites

Participating Sites

- University of Arizona, Tucson, AZ
- Stanford University, Stanford, CA
- University of Colorado, Denver, CO
- Columbia University, New York City, NY
- University of North Carolina, Chapel Hill, NC
- Vanderbilt University Medical Center, Nashville, TN
- Marshfield Clinic Research Institute, Marshfield, WI

RVTN – National

National Approach (also known as "Track COVID at Home "). National Protocol

Outcome: Household transmission among community members confirmed with SARS-CoV-2

Population: Households of community members with positive SARS-CoV-2 tests recruited from national commercial laboratories

External partner: Westat

Test-negative prospective case control

Increasing Community Access to Testing (ICATT) program

Outcome: Symptomatic and asymptomatic SARS-CoV-2 infections

Population: Anyone seeking testing at a pharmacy

Participating sites: 8,319 locations across the United States and its territories

IVY

Influenza and Other Viruses in the Acutely Ill (IVY) network

Outcome: Hospitalization with SARS-CoV-2

Population: Hospitalized adults

Participating Sites: 21 large adult hospitals in 20 cities in 18 states:

- California
- Colorado
- Florida
- Georgia
- Iowa
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Missouri
- New York
- North Carolina
- Ohio
- Oregon
- Tennessee
- Texas
- Utah
- Washington

PReventing Emerging Infections through Vaccine EffectiveNess Testing (PREVENT) Sites

Outcome: Symptomatic SARS-CoV-2 infections

Population: Healthcare personnel

Participating Sites

- Baystate Medical Center, Springfield, MA
- Jackson Memorial Hospital, Miami, FL
- Olive View-UCLA Medical Center, Los Angeles, CA
- Thomas Jefferson University Hospital, Philadelphia, PA
- Truman Medical Centers, Kansas City, MO
- University of Alabama Hospital, Birmingham, AL
- Community Regional Medical Center/ UCSF, Fresno, CA
- University of Chicago Medical Center, Chicago, IL
- University of Iowa Hospitals and Clinics, Iowa City, IA
- University of Massachusetts Memorial Medical Center, Worcester, MA
- LCMC Health Hospitals, New Orleans, LA
- University of Mississippi Medical Center, Jackson, MS
- University of Texas Southwestern Medical Center and Parkland Hospital, Dallas, TX
- University of Washington Hospitals, Seattle, WA
- Valleywise Health Medical Center, Phoenix, AZ.

Emerging Infection Program Sites

FLU-VE Network

US Influenza Vaccine Effectiveness Network Protocol for Influenza and Other Respiratory Viruses (including COVID-19)

Outcome: Symptomatic infection with SARS-CoV-2

Population: Outpatient adults and children ≥6 months of age

Participating Sites

- Group Health Cooperative, Seattle, WA
- Marshfield Clinic Research Institute, Marshfield, WI
- University of Michigan, Ann Arbor, MI
- Henry Ford Health Systems, Detroit, MI

- University of Pittsburgh Medical Center, Pittsburgh, PA
- Scott & White Healthcare, Temple, TX

VISION

Outcome: Symptomatic and asymptomatic SARS-CoV-2 infections, emergency department/urgent care visits with SARS-CoV-2, hospitalization with SARS-CoV-2

Population: Individuals of all ages who have an emergency department or urgent care visit or hospitalization within the facility network

Participating Sites

- Baylor Scott and White Health (Texas)
- Columbia University (New York)
- HealthPartners (Minnesota and Wisconsin)
- Intermountain Healthcare (Utah)
- Kaiser Permanente Northern California (California)
- Kaiser Permanente Northwest (Oregon and Washington)
- Regenstrief Institute (Indiana)
- University of Colorado (Colorado)

Overcoming COVID-19

Overcoming COVID-19 to track and characterize development of complications in children and young adults exposed to SARS-CoV-2

Outcome: Hospitalization with SARS-CoV-2

Population: Hospitalized children and adolescents aged 18 years and younger

Participating Sites: Sites can be found here .

Read all *MMWR* COVID-19 vaccine effectiveness and safety reports.

For the latest CDC data on COVID-19 vaccine effectiveness: CDC COVID Data Tracker

For more information on COVID-19 vaccine effectiveness: COVID-19 Vaccines are Effective.

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