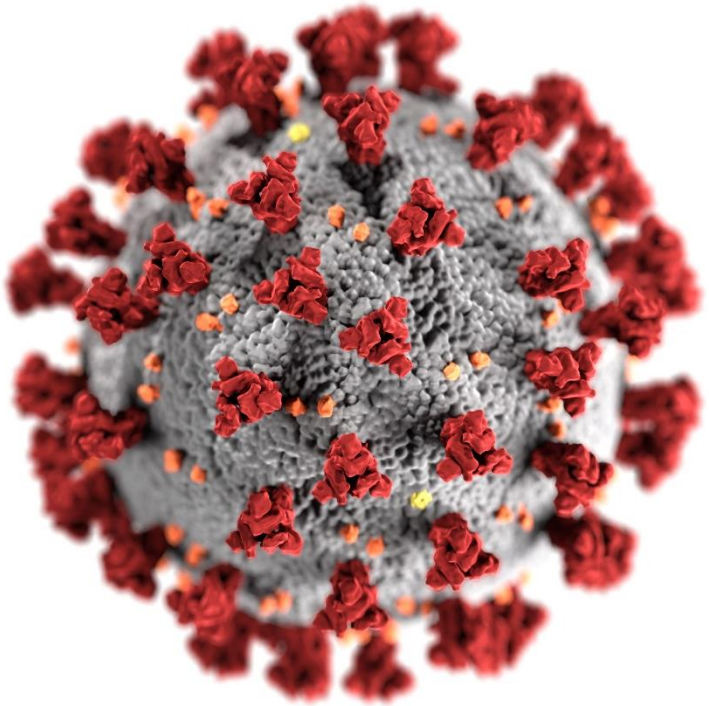
Show me the data! What numbers mean to COVID-19 communication



April 27, 2022

cdc.gov/coronavirus

Overview

- Welcome
- John T. Brooks, MD - Following the Science
- Brian King, PhD, MPH - How CDC Monitors Data/COVID-19 Community Levels
- Matthew Ritchey, PT, DPT, MPH - Quantitative Data
- Anisha Verma, MPH - Qualitative Data/Vaccine Insights
- Q&A

Today's speakers

John T. Brooks, MD
Senior Science Advisor,
CDC COVID-19 Response
Chief Medical Officer,
CDC Division of HIV Prevention

Brian A King, PhD, MPH
Chief Science Officer,
CDC COVID-19 Response
Executive Editor, MMWR Series

Matthew Ritchey, PT, DPT, MPH
Captain, US Public Health Service
Lead, Data, Analytics & Visualization (DAV) Task Force
CDC COVID-19 Response

Anisha Verma, MPH
Senior Analyst
Immunization Service Division
National Center for Immunization and Respiratory Diseases

Moderator: Haley McCalla, MPH, CHES
Public Health Partnerships Lead
State, Tribal, Local and Territorial Support Task Force, CDC COVID-19 Response

John T. Brooks, MD
Following the science

Brian A. King, PhD, MPH
How CDC monitors data COVID-19 Community Levels

Where are we now in the COVID-19 pandemic?

COVID Data Tracker

Daily Update for the United States

Cases
New Cases (Daily Avg)
47,407

Case Trends

Deaths
New Deaths (Daily Avg)
330

Death Trends

Hospitalizations
New Admissions (Daily Avg)
1,782

Admission Trends

Vaccinations
% At Least 1 Dose
82.4%

People Age 5+

Total Cases	Total Deaths	Current Hospitalizations	Total At Least 1 Dose
80,874,929	988,991	10,340	257,354,769

CDC | Data as of: April 26, 2022 2:11 PM ET. Posted: April 26, 2022 4:19 PM ET

https://covid.cdc.gov/covid-data-tracker/#datatracker-home

Scientific Advances Have Helped Move the COVID-19 Pandemic to a New Phase

Widespread Availability of Vaccines & Testing

Immunity from Vaccination and Infection

Advances in Treatments

Why refocus efforts for monitoring COVID-19 impact in communities?

Community measures should focus on minimizing the impact of severe COVID-19 illness on health and society

Protecting the Most Vulnerable

Preventing Severe Illness

Minimizing Burden on the Healthcare System

What's a COVID-19 Community Level?

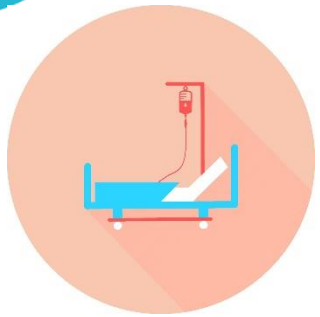
- New tool to help communities decide what prevention measures to take based on the latest data.
- Every community in the United States is classified as:

LOW	MEDIUM	HIGH
Limited impact on healthcare system, low levels of severe illness	Some impact on healthcare system, more people with severe illness	High potential for healthcare system strain; high level of severe illness

Latest Data

New COVID-19 Cases

New COVID-19 Admissions

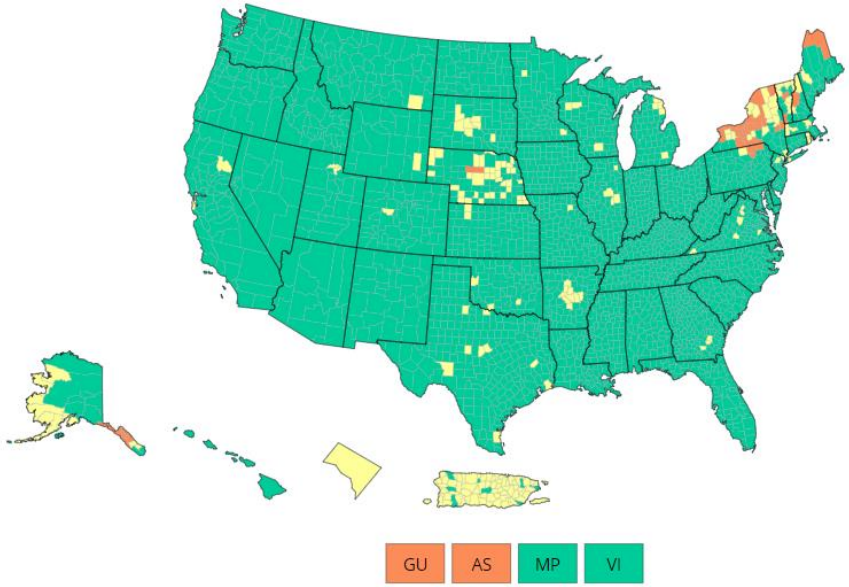


Beds with COVID-19 Patients

COVID-19 Community Levels by County

State or territory: Select a State

County or metro area: Select County



COVID-19 Community Levels in US by County

	Total	Percent	% Change
High	40	1.24%	0.81%
Medium	228	7.07%	1.64%
Low	2956	91.69%	– 2.45%

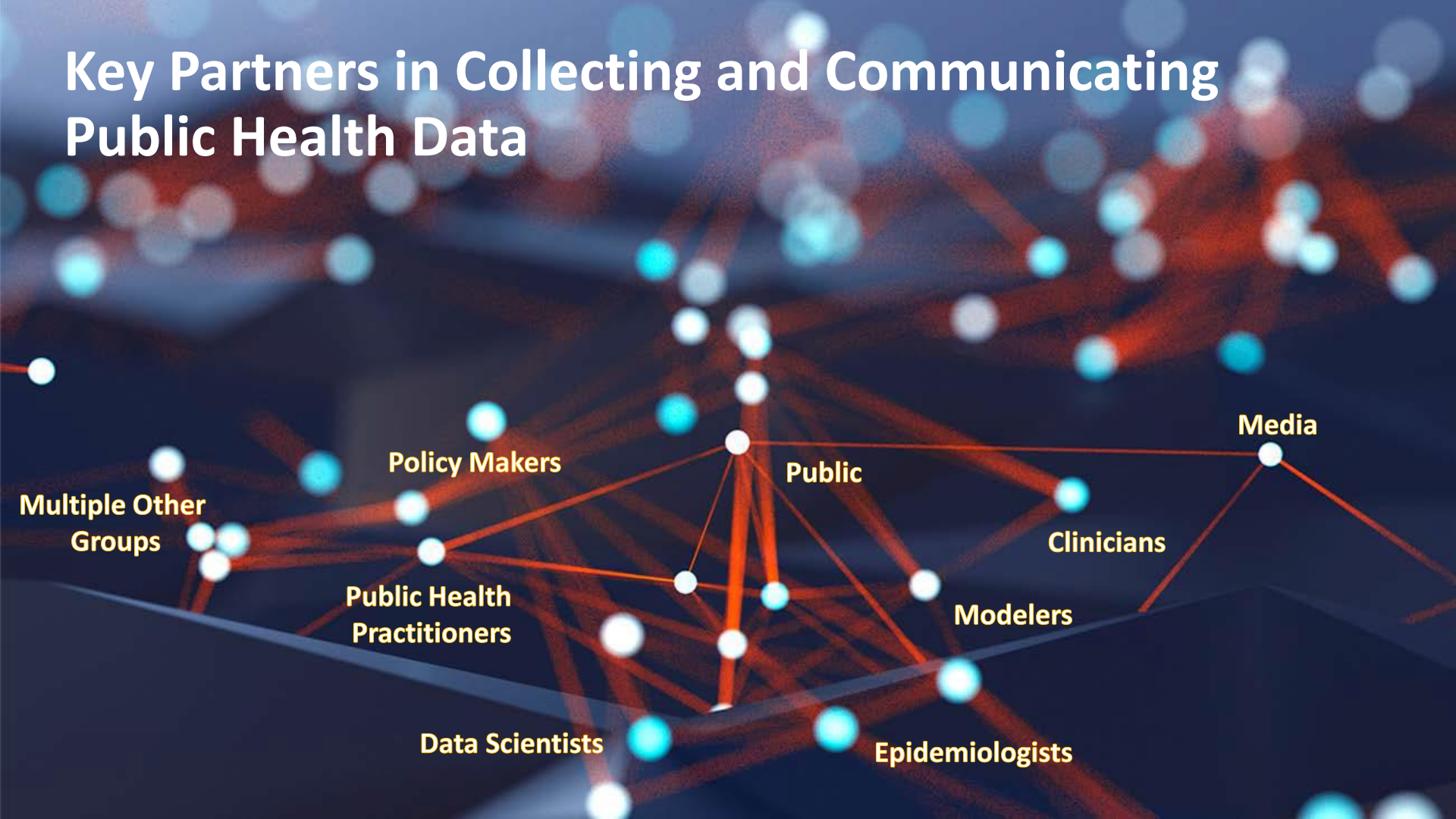
How are COVID-19 Community Levels calculated?

https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html

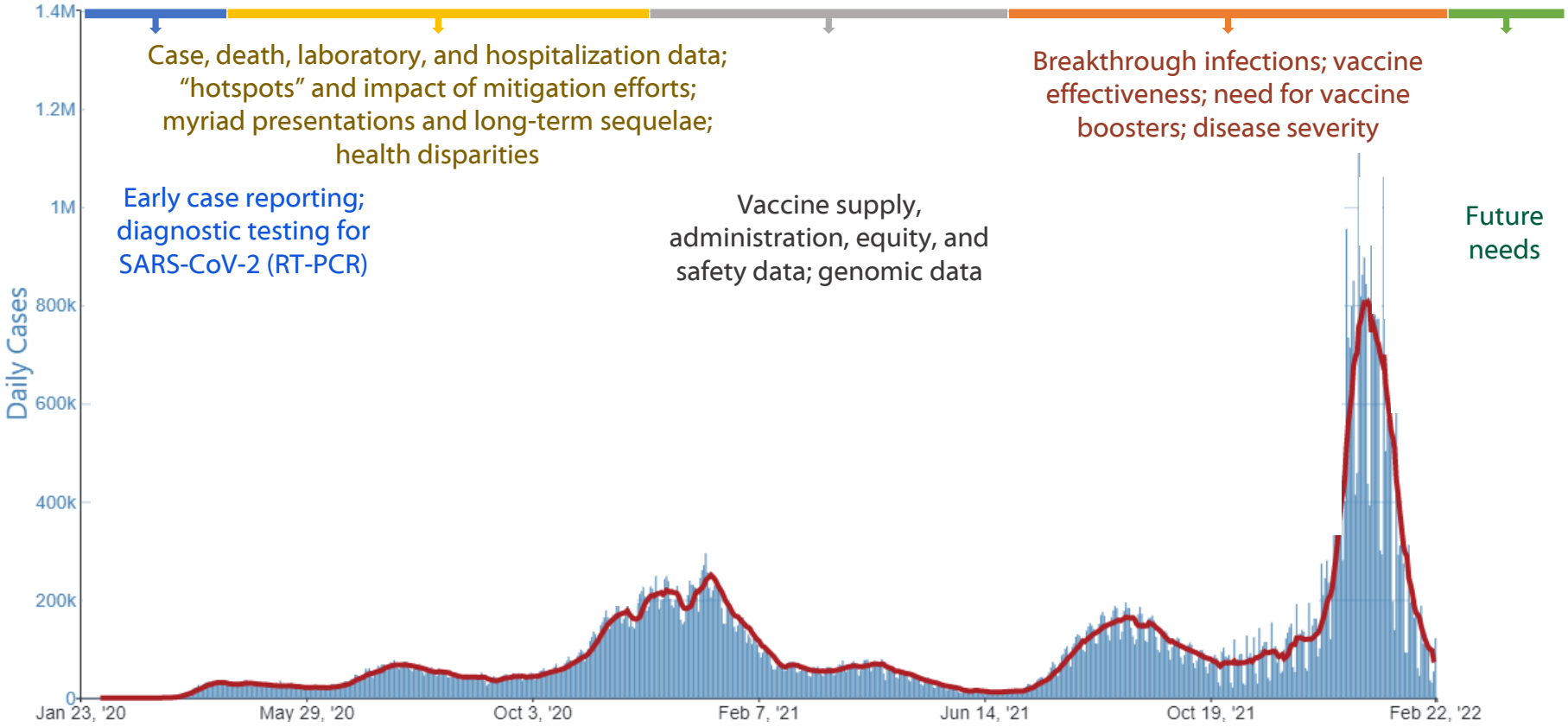
Map screenshot date:
April 27, 2022

CAPT Matthew Ritchey, PT, DPT, MPH
Quantitative data

Key Partners in Collecting and Communicating Public Health Data



COVID-19 Pandemic: Evolving Data and Analytic Needs

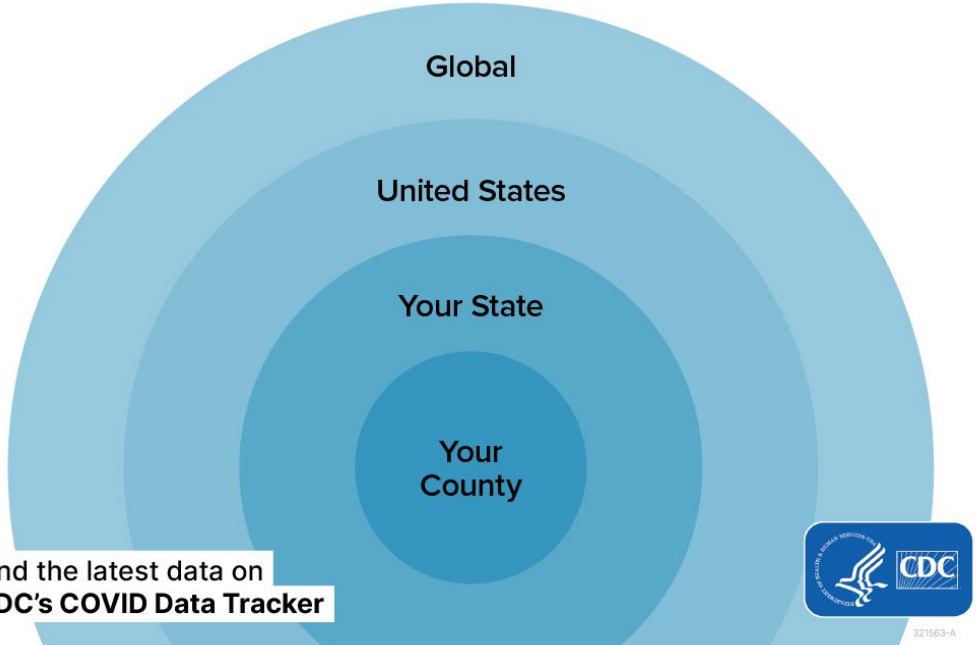


Data Collected to Monitor COVID-19 Disease Burden*

COVID-19 Electronic Laboratory Reporting (CELR)	~866 million COVID-19 tests
Case-Based Disease Surveillance	~72 million individual-level case reports ~81 million aggregate case reports
National Syndromic Surveillance Program	>7.4 million COVID-19 emergency department visits
Immunization Data Systems	~574 million vaccinations administered
Genomics Data	~2.2 million published sequences
Wastewater Surveillance Data	934 sites (49 jurisdictions) provided >59,000 samples
Healthcare Data	~140 terabytes of clinical and administrative data
Population-based surveillance systems, like COVID-NET**	Hospitalization data from 250 hospitals in 14 states

*Data current as of April 27, 2022; test count represents COVID-19 Nucleic Acid Amplification Test (NAAT) results; additional information at: https://covid.cdc.gov/covid-data-tracker/;
** https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covid-net/purpose-methods.html

Stay on top of data from your community and from around the world using the CDC COVID Data Tracker



- Launched April 2020
- Combines county, state, national, and global data from across the COVID-19 response in a series of interactive dashboards
- More than 292 million page views since April 2020

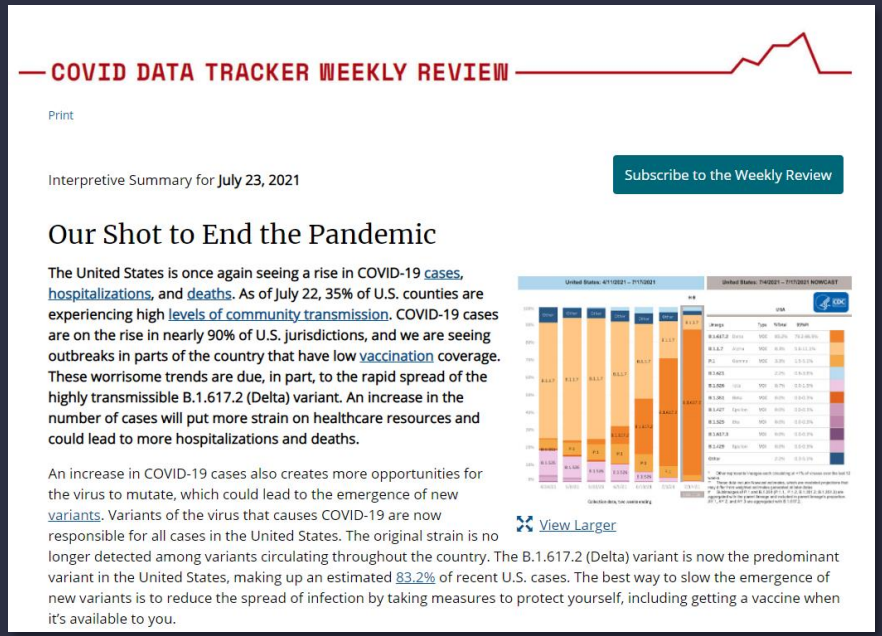
https://covid.cdc.gov/covid-data-tracker/#datatracker-home

Data as of April 27, 2022

Data Presented on CDC COVID Data Tracker

Your Community	Vaccination Delivery & Coverage	Variants & Genomic Surveillance
Health Equity	Vaccination Effectiveness & Breakthroughs	Antibody Seroprevalence
Pediatric Data	Cases, Deaths, & Testing	People at Increased Risk
Pregnancy Data	Demographic Trends	Wastewater Surveillance
Communications Resources	Heath Care Settings	Prevention Measures & Social Impact

COVID Data Tracker Weekly Review



COVID DATA TRACKER WEEKLY REVIEW

Print

Interpretive Summary for **July 23, 2021**

Subscribe to the Weekly Review

Our Shot to End the Pandemic

The United States is once again seeing a rise in COVID-19 cases, hospitalizations, and deaths. As of July 22, 35% of U.S. counties are experiencing high levels of community transmission. COVID-19 cases are on the rise in nearly 90% of U.S. jurisdictions, and we are seeing outbreaks in parts of the country that have low vaccination coverage. These worrisome trends are due, in part, to the rapid spread of the highly transmissible B.1.617.2 (Delta) variant. An increase in the number of cases will put more strain on healthcare resources and could lead to more hospitalizations and deaths.

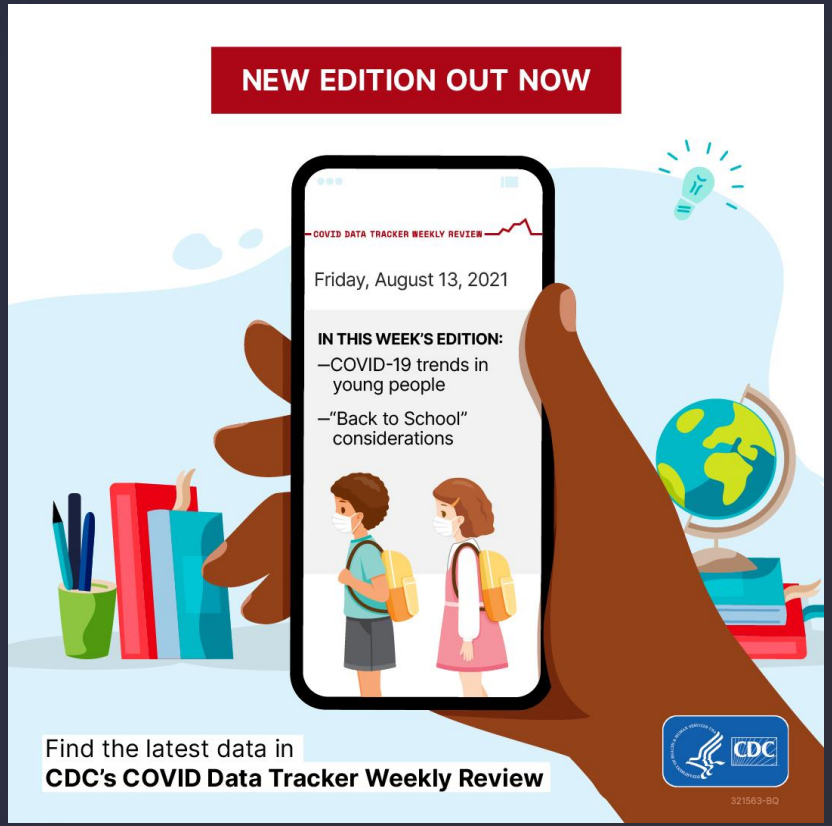
View Larger

An increase in COVID-19 cases also creates more opportunities for the virus to mutate, which could lead to the emergence of new variants. Variants of the virus that causes COVID-19 are now responsible for all cases in the United States. The original strain is no longer detected among variants circulating throughout the country. The B.1.617.2 (Delta) variant is now the predominant variant in the United States, making up an estimated 83.2% of recent U.S. cases. The best way to slow the emergence of new variants is to reduce the spread of infection by taking measures to protect yourself, including getting a vaccine when it's available to you.

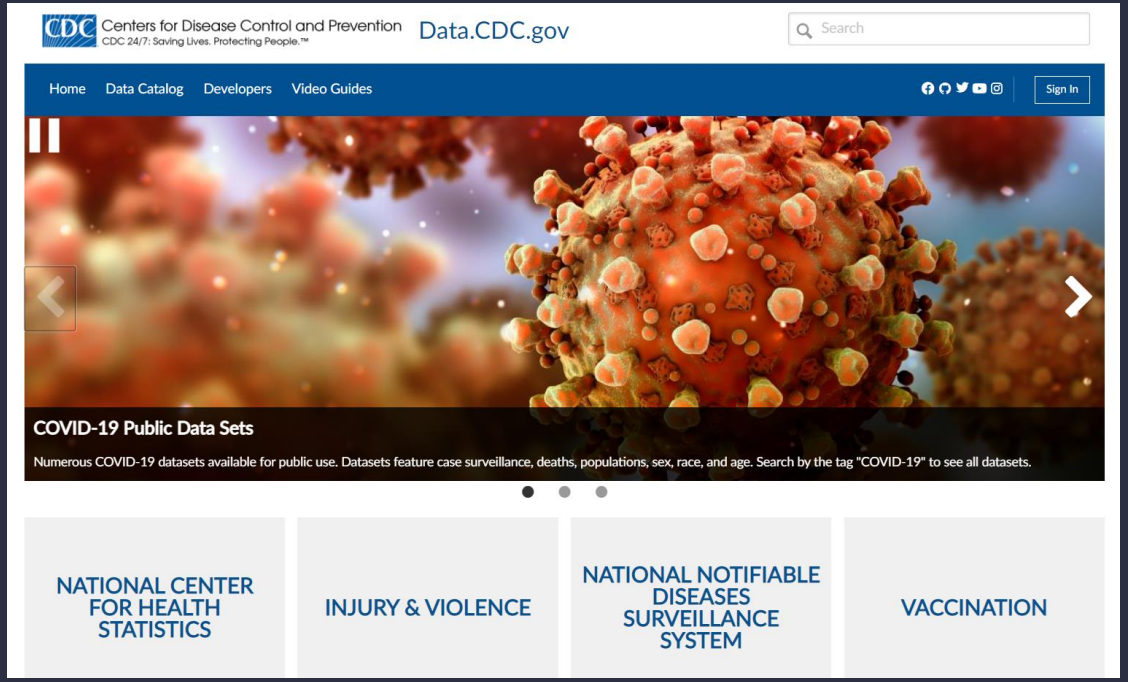
>>10.3M Page Views since launch

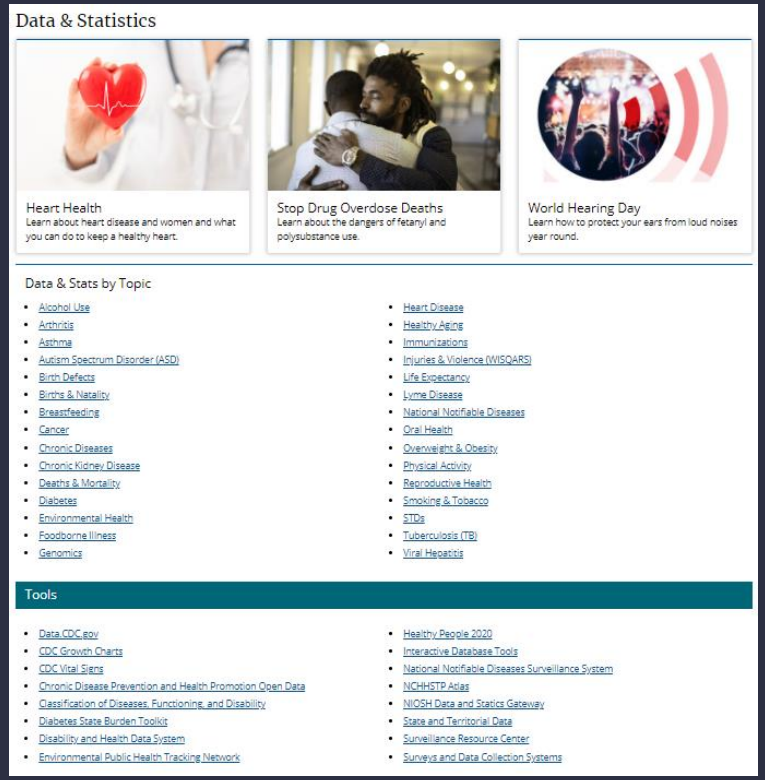
>98K Newsletter subscribers

https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html



Other Sources of COVID and Non-COVID Data





https://www.cdc.gov/datastatistics/index.html

CDC Data Modernization Initiative (DMI) Priorities

Build the right foundation

Accelerate data into action

Develop a state-of-the-art workforce

Support + extend partnerships

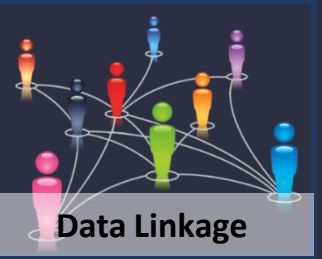
Manage change + governance

DMI Strategic Implementation Plan (cdc.gov)

Important Public Health Data Considerations

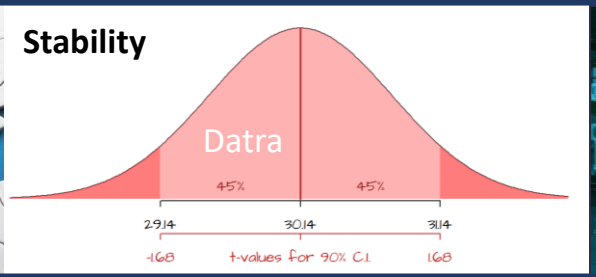
Data Attributes and Alignment
Example:
National vs. local data snapshots

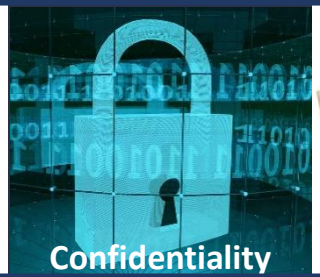
Data Connections
Example:
Vaccination and health outcome data



Data Systems
Example:
Hospitalization data

Data Sharing
Example:
Race and ethnicity data





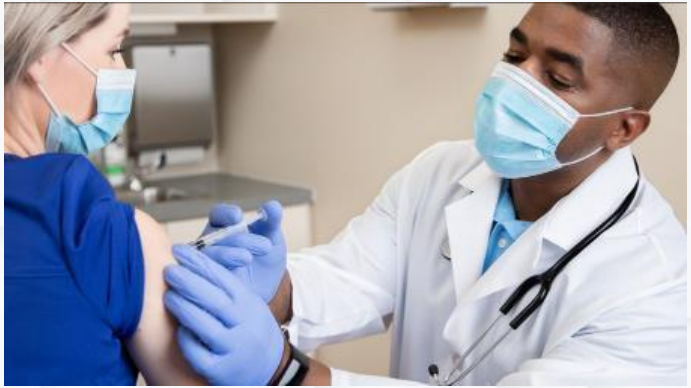
We are in a different place than we were before the pandemic

Electronic Case Reporting

Automated case data to reduce burden on providers

Healthcare Facilities Reporting:
From 187 to >11,000

COVID-19 Vaccination Data Flow



Advanced data pipelines to inform action

Vaccine Dose Data Tracked:
From none to over 574M

CELR Laboratory Data Flow

Streamlined lab data flow from state health departments to CDC

COVID Lab Results to CDC:
From none to over 1.5M per day

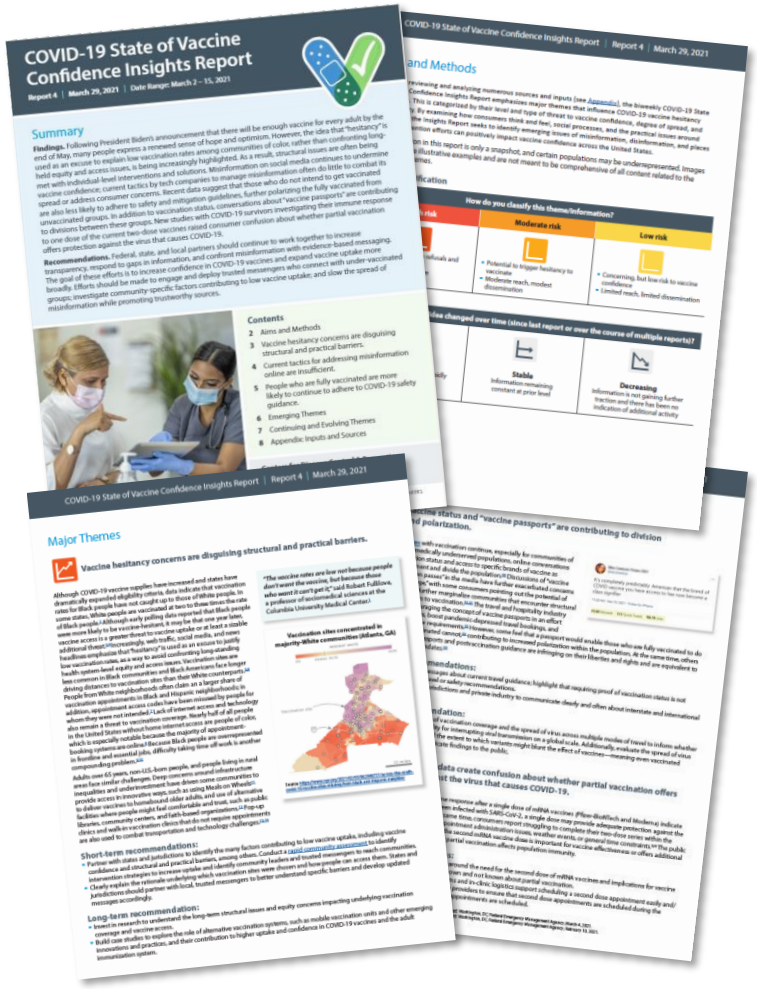
CELR: COVID-19 Electronic Laboratory Reporting

Information as of April 27, 2022

Anisha Verma, MPH
Qualitative data

CDC's COVID-19 State of Vaccine Confidence Insights Report

- Regular reports about the status of COVID-19 vaccine confidence in the United States
- Includes major themes that influence whether people trust and get vaccines
- Helps identify concerns and misinformation topics
- Helps find ways to increase vaccine confidence across the United States

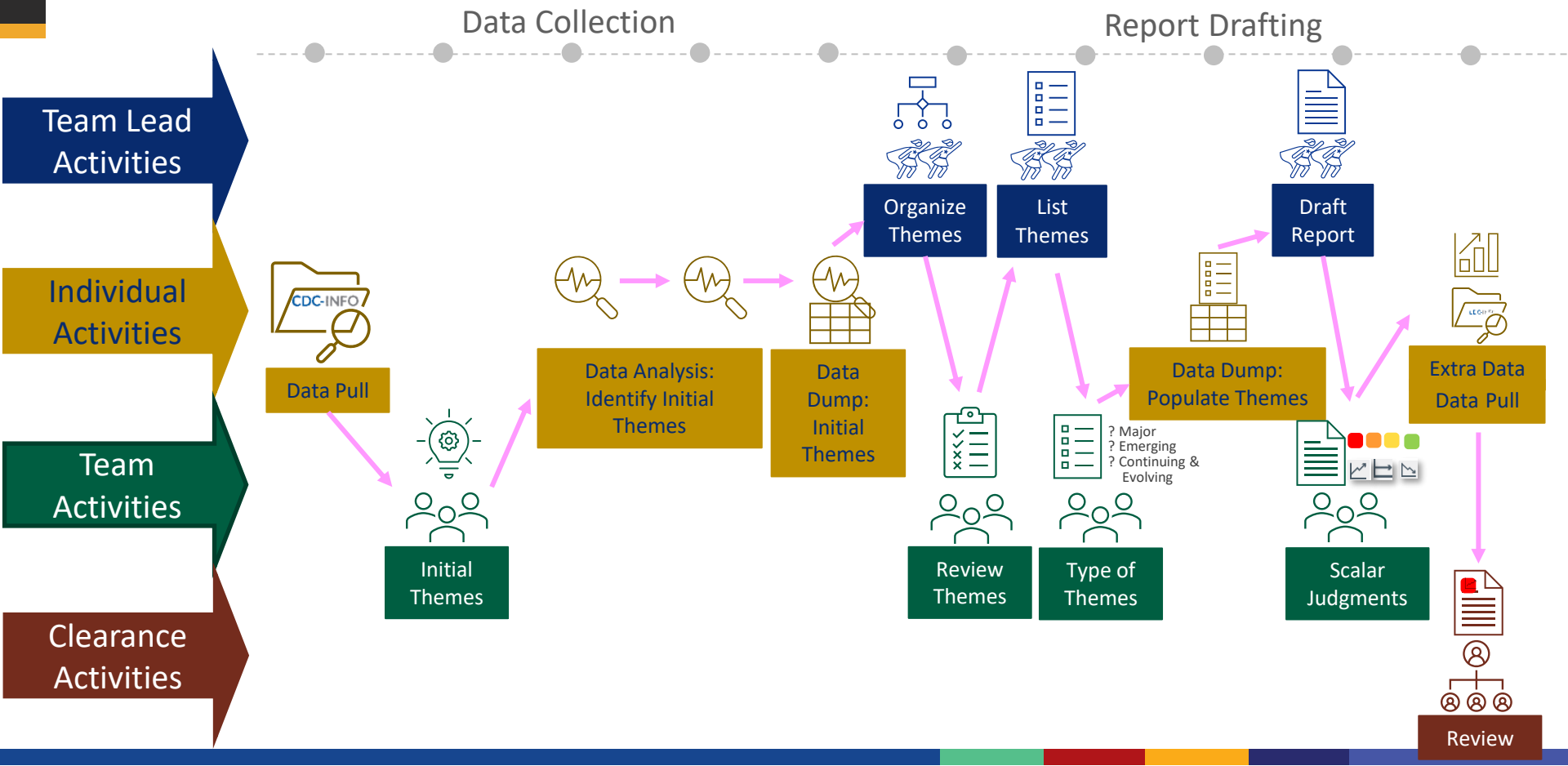


CDC's COVID-19 State of Vaccine Confidence Insights Report

- Collects data from over 24 quantitative and qualitative data sources
- Themes identified using integrated and thematic analysis
- Assigned a threat level relative to vaccine uptake and information spread
- Suggested actions identified for each theme
- Disseminated to almost 1000 internal and external partners

Type	Input	Cadence	Sources	Tactics for Utilization
Social Media Listening & Media Monitoring	Communication Surveillance Report	Daily on weekdays	• Google news • Meltwater • CrowdTangle • Native platform searches	• Share of voice topic analysis to identify themes • Emerging topics
	Meltwater	Daily	• Facebook, Twitter, Instagram • Blogs • News media • Online forums	• Share of voice topic analysis • Emerging theme topics • Identify high reach/velocity topics
	OADC Channel Comment Analysis	Daily on weekdays	• Native platform searches	• Sentiment analysis • Identify message gaps/voids
Direct Reports	CDC-INFO Metrics	Weekly	• CDC-INFO inquiry line list • Prepared response (PR) usage report	• Cross-compare PR usage with inquiry theme analysis • Sentiment analysis • Identify information gaps/voids
	VTF Media Requests	Weekly	• Media request line list	• Leading indicator for news coverage • Identify information gaps/voids
	Web Metrics	Weekly	• Top pages • Google search queries • Top FAQs • Referring domains	• Identify information gaps/voids, • Identify keywords/search terms, changes in web traffic
Research	Poll Review	Weekly	• Harris Poll, PEW research, Gallup Poll, KFF • New data related to vaccine hesitancy	• Identify socio-behavioral indicators related to motivation and intention to vaccinate
	Literature Review	Weekly	• PubMed, LitCovid, ProQuest Central • New data related to vaccine hesitancy	• Identify current vaccination intention • Identify barriers to vaccination
Third Party Reports	Tanaq Social Listening +Media Monitoring Report	Weekly	• Meltwater • Sprout Social • First Draft • Native platform searches	• Trending topics • Demographic and geographic conversation monitoring
	CrowdTangle content insights report	Biweekly	• Facebook	• Top pages (voices), groups • General trends/sentiment analysis • News analysis through posts
	First Draft News Vaccine Misinformation Insights Report	Monthly	• Proprietary methods	• Media trends analysis • Emerging threats and data deficits • Online vaccine narratives
	Project VCTR	Weekly	• Proprietary methods	• National and regional trends in negative attitudes toward vaccination • Conversations around Legislation

State of Vaccine Confidence Report Process



Synthesizing multiple inputs and identifying themes through a consensus-building process.

Theme Classification

How do you classify this theme/information?			
High risk	**Moderate risk**	**Low risk**	**Positive sentiment**
▪ May lead to vaccine refusals and decreased uptake ▪ Wide reach, pervasive	▪ Potential to trigger hesitancy to vaccinaton ▪ Moderate reach, modest dissemination	▪ Concerning, but low risk to vaccine confidence ▪ Limited reach, limited dissemination	▪ Could increase vaccine confidence, intent, or motivation ▪ Variable reach and dissemination

How has this theme/idea changed over time (since last report or over the course of multiple reports)?		
Increasing Information spreading rapidly	**Stable** Information remaining constant at prior level	**Decreasing** Information is not gaining further traction and there has been no indication of additional activity

Not your average social listening report.

Parents expressed concern, confusion, and frustration as children return to school.

With K-12 schools and institutions of higher education either already in session or about to open, the safety and well-being of students, faculty, and staff—as well as of their families and communities—once again is the subject of debate. This debate threatens to harden the views of consumers who are unvaccinated and erode vaccine confidence generally.[72,73,74] While some parents continue to favor reopening K-12 schools in person and at capacity, parental views regarding appropriate mitigation strategies and mask or vaccine mandates track with political affiliation and vaccination status.[75,76,77] Anxious parents of young children are impatient that COVID-19 vaccines are not yet authorized for children younger than 12 years old. They are also slightly more likely to favor school mask requirements than those whose children are eligible to be vaccinated.[78,79]

Vocal vaccine deniers continued to amplify misinformation on social media about supposed dangers that masking and vaccination pose for children. This is fueling conflict between COVID-19 skeptics and parents and school administrators who support masks, vaccination, and other mitigation strategies.[80,81,82,83,84,85] Clashes over masks in schools suggest that vaccination mandates, especially for younger children, will be difficult to implement, especially given that some politicians, faith leaders, and school administrators are already coaching skeptical parents on how to circumvent mask and vaccine requirements.[86,87]

Ways to act:

- Develop and disseminate messages about the risk of COVID-19 for children. Highlight the increasing case numbers among children and the increasing number of children hospitalized with severe COVID-19. Remind consumers about the role that children play in spreading the virus.
- Continue to amplify messages that vaccination for children 12 years and older is the best way to protect them from illness, clarifying that the risk for severe COVID-19 or complication caused by illness is higher than the risk of an adverse event from vaccination.
- Partner with school administrators and support them to promote messages about the benefits of vaccination or connect them to other trusted messengers. Also, help them promote mitigation measures for children, parents, school staff, and the broader community. Remind them to connect unvaccinated staff and families to vaccination information and events.

Consumers expressed frustration and confusion about updated guidance for fully vaccinated individuals.

CDC's update to the Interim Public Health Recommendations for Fully Vaccinated People generated confusion and exasperation among many consumers.[88,89,90] Initial confusion about the updated guidance—particularly around when and where indoor masking for vaccinated individuals would be required—drove social media users to express frustration both with the updated guidance and with unvaccinated consumers. Many people saw consumers who are unvaccinated as responsible for the Delta surge and associated return of restrictions.[91,92,93]


re: A new mask mandate signals failure of The Biden Administration

New "mask mandate" is about:

1. Punishing red states living their lives and economically and culturally destroying blue states

2. Extending eviction moratorium and unemployment tendies to further delay an economic collapse until midterms

3. Just because it makes us mad

MASKS. DONT. DO. ANYTHING.

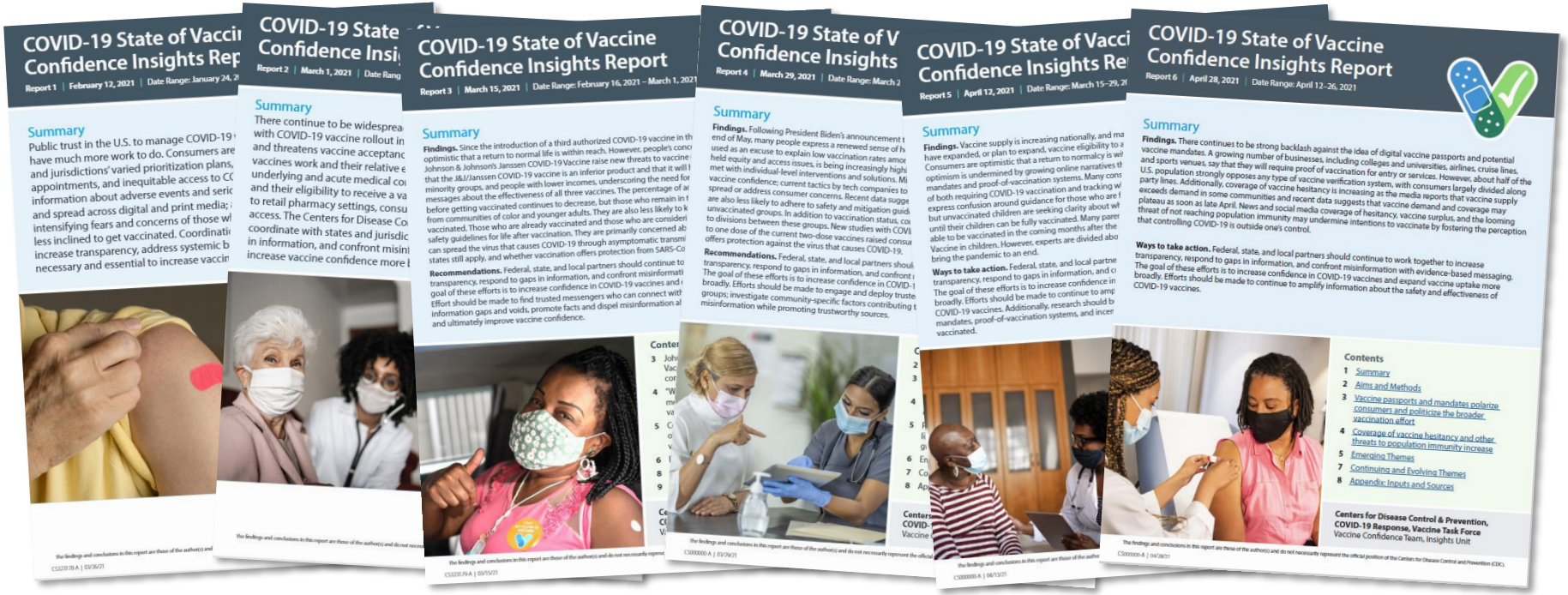
The reimposition of mitigation strategies that equally affected people who are vaccinated and unvaccinated was amplified on both news media and social media.[94,95,96,97] This, in turn, spawned opinion pieces chiding the frustrated for their pettiness and warning that openly shaming people who are unvaccinated could depress vaccine acceptance by driving some in the "moveable middle" into outright vaccine refusal.[98,99,100]

Renewed political and social clashes over mitigation measures could have further undermined vaccine confidence. Mask skeptics and vocal vaccine deniers seized upon the uncertainties that inform CDC's updated guidance to disparage vaccines, sow doubt about the efficacy of vaccination, and create suspicion about the motives of public and private entities advocating vaccination.[101,102,103]

Ways to act:

- Disseminate messages that provide clarity around guidance for people who are fully vaccinated. Remind people that both being vaccinated and wearing masks in public places can help protect people who are too young to be vaccinated, unable to be vaccinated, or at high risk for serious illness.
- Continue to amplify messages that asymptomatic or mild breakthrough cases of COVID-19 are expected and are a normal occurrence with many vaccines, such as influenza vaccination. Reassure consumers that even high numbers of breakthrough infections align with projected vaccine effectiveness and that breakthrough cases are likely much less severe than they would have been had the person not been vaccinated.

Since the State of Vaccine Confidence Reports began, we have seen the conversations shift and change drastically.



Q&A

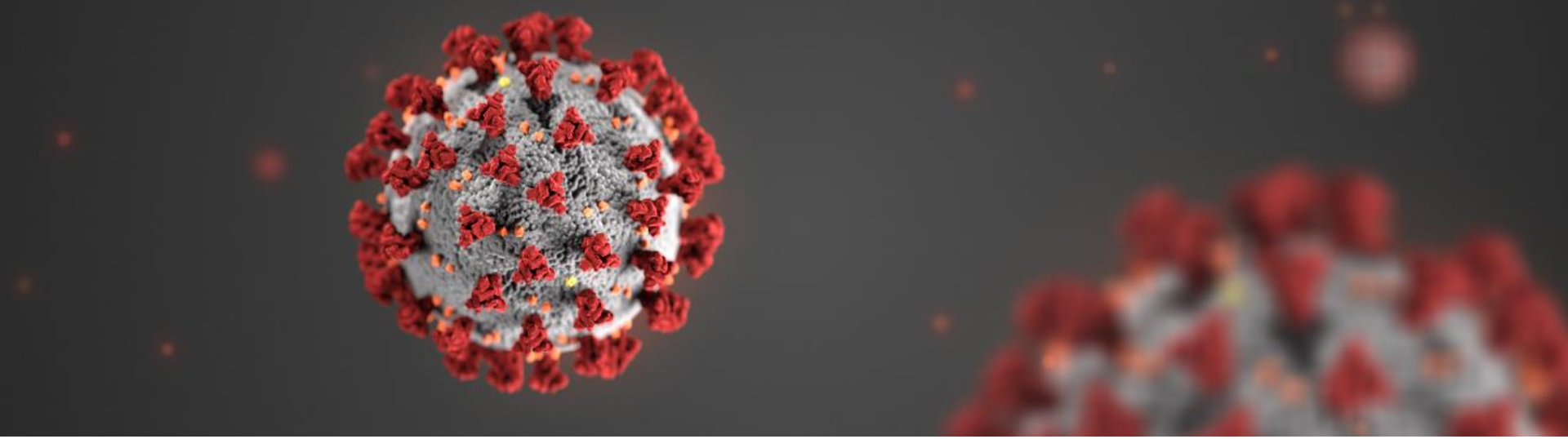

DEPARTMENT OF HEALTH & HUMAN SERVICES USA
CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

For more information

This webinar will be posted in 8-10 days at CDC EPIC Webinars

For all other questions, contact epic@cdc.gov

Thank you!



For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.