

# COVID-19 Vaccines & Implementation

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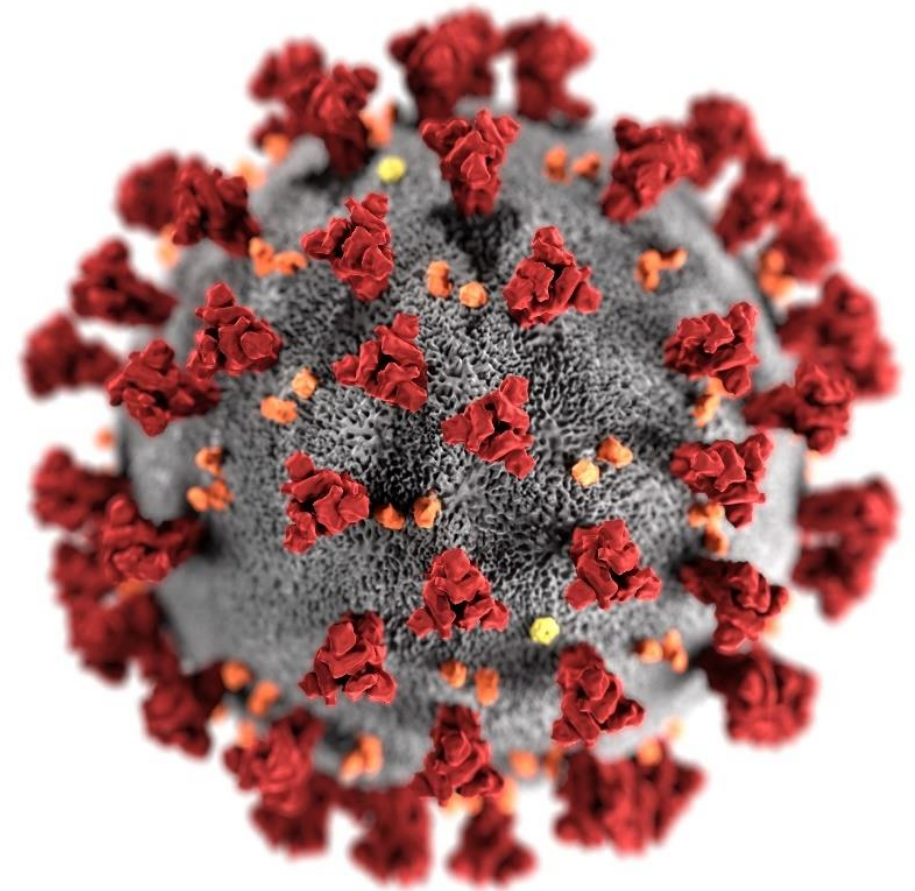


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**Lead, Essential Workers Team**  
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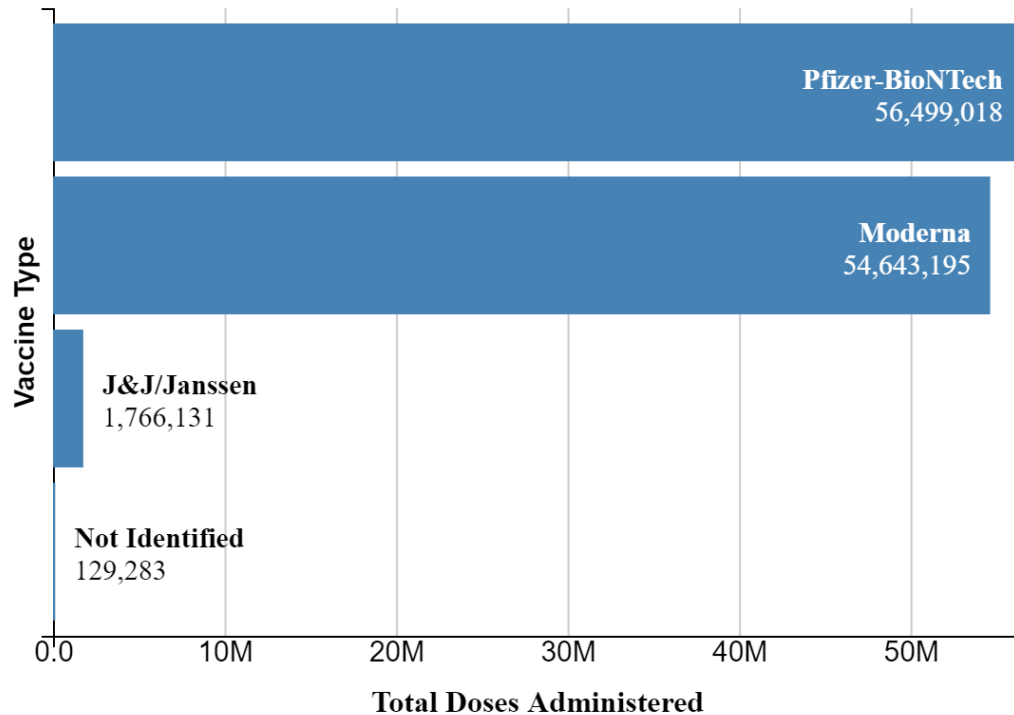


# COVID-19 Vaccines Administered

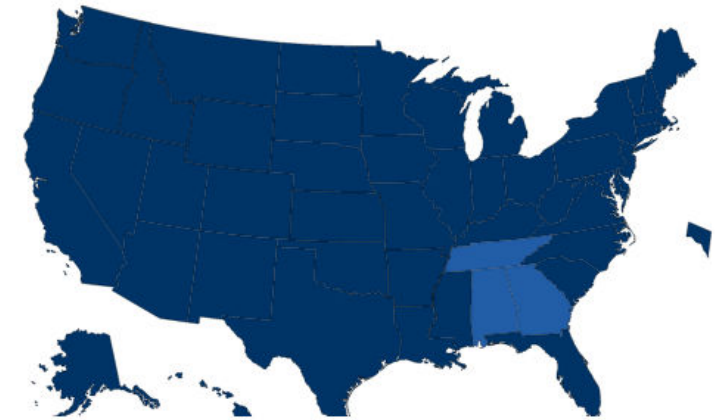
As of March 17, 2021

## Total Vaccine Doses Administered: 113,037,627

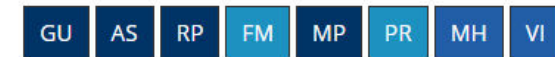
U.S. COVID-19 Vaccine Administration by Vaccine Type



Total Doses Administered Reported to the CDC by State/Territory and for Select Federal Entities per 100,000 of the Total Population



Territories



Federal Entities



\* Data for Federal Entities are presented here and are also incorporated into the respective jurisdictional totals



# COVID-19 Vaccination Is a Safer Way to Build Protection

- Getting the virus that causes COVID-19 may offer some natural protection, known as an “antibody” or “immunity.”
  - However, experts don’t know how long this protection lasts.
- The risk of severe illness and death from COVID-19 far outweighs any benefits of natural immunity.
- COVID-19 vaccination will help protect you by building immunity without the risk of severe illness.



# COVID-19 Vaccines Under FDA Emergency Use Authorizations (EUAs)

- Three vaccines have received Emergency Use Authorizations (EUAs) from the FDA:
  - **Pfizer/BioNTech:** 2 doses given at least 21 days apart
  - **Moderna:** 2 doses given at least 28 days apart
  - **Johnson & Johnson/Janssen:** 1 dose
- All three vaccines were tested in tens of thousands of adults from diverse backgrounds, including older adults and communities of color.
- All of the available vaccines have been proven effective at preventing serious illness, hospitalization, and death from COVID-19 disease.
- It is unknown how long protection from vaccines might last.

Sources: <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-conclude-phase-3-study-covid-19-vaccine>  
<https://investors.modernatx.com/news-releases/news-release-details/modernas-covid-19-vaccine-candidate-meets-its-primary-efficacy>

# What are messenger RNA (mRNA) vaccines?

- Carry genetic material that teaches our cells how to make a harmless piece of “spike protein,” which is found on the surface of the SARS-CoV-2 virus.
  - Genetic material from the vaccine is destroyed by our cells once copies of the spike protein are made and it is no longer needed.
- Cells display this piece of spike protein on their surface, and an immune response is triggered inside our bodies. This produces antibodies to protect us from getting infected if the SARS-CoV-2 virus enters our bodies.

# What Are Viral Vector Vaccines?

- Viral vector vaccines use a modified version of a different virus (the vector) to deliver important instructions to our cells.
- For COVID-19 viral vector vaccines, the vector (**not** the virus that causes COVID-19, but a different, harmless virus) enters a cell in our body and then uses the cell's machinery to produce a **harmless** piece of the virus that causes COVID-19.
  - This piece is known as a spike protein and it is only found on the surface of the virus that causes COVID-19.
- Non-replication—this is not a live-virus vaccine

# COVID-19 Vaccines

- Like all vaccines, COVID-19 vaccines have been **rigorously tested** for safety before being authorized for use in the United States.
- The vaccine technology has been **well studied for decades**.
- COVID-19 vaccines **do not carry a risk of causing disease in the vaccinated person**.
- The genetic material delivered by the COVID-19 vaccines **does not affect or interact with a person's DNA**.

# Fast-Tracking COVID-19 Vaccines While Ensuring Safety

- COVID-19 vaccines were developed based on years of research.
- Researchers used existing networks to conduct COVID-19 vaccine trials.
- Manufacturing began while clinical trials were still underway. Normally, manufacturing doesn't begin until after trials are completed.
- FDA and CDC are prioritizing review and authorization of COVID-19 vaccines.

\*For more information, visit the COVID-19 Prevention Network:

[www.coronaviruspreventionnetwork.org/about-covpn](http://www.coronaviruspreventionnetwork.org/about-covpn)

# Key Facts about COVID-19 Vaccination



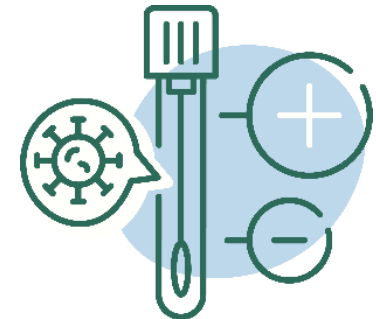
Getting vaccinated can help prevent you from getting sick with COVID-19



People who have already gotten sick with COVID-19 may still benefit from getting vaccinated



COVID-19 vaccines cannot give you COVID-19



COVID-19 vaccines will not cause you to test positive on COVID-19 viral tests\*

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/about-vaccines/vaccine-myths.html>

\*<https://www.cdc.gov/coronavirus/2019-ncov/hcp/testing-overview.html>

# Safety of COVID-19 Vaccines is a Top Priority

COVID-19 vaccines are being held to the **same safety standards** as all vaccines.

## Before Authorization



- **FDA** carefully reviews all safety data from clinical trials.
- **ACIP** reviews all safety data before recommending use.

## After Authorization



- **FDA** and **CDC** closely monitor vaccine safety and side effects. There are systems in place that allow CDC and FDA to watch for safety issues.

**VAERS** Vaccine Adverse Event Reporting System  
[www.vaers.hhs.gov](http://www.vaers.hhs.gov)



V-safe: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafe.html>



# Active Safety Monitoring for COVID-19 Vaccines

- **V-safe** is a new CDC smart-phone based monitoring program for COVID-19 vaccine safety:
  - Uses text messaging and web surveys to check in with vaccine recipients after vaccination.
  - Participants can report any side effects or health problems after COVID-19 vaccination.
  - Includes active telephone follow-up by CDC for reports of significant health impact.



# v-safe: Pregnancy monitoring



**Smartphone-based platform that initiates active outreach among those who report medically attended events or pregnancy following COVID-19 vaccination which links to pregnancy registry**



**If a woman reports:**

- ✓ **Pregnant at time of vaccination (initial survey for each dose)**
- ✓ **Had a positive pregnancy test since vaccination (Day 21, 42 of each dose and monthly surveys)**



**COVID-19 Vaccine Pregnancy Registry:**

- Once each trimester during pregnancy
- Once after delivery
- Once after the infant is 3 months old.



**Medical records requested:**

- At conclusion of pregnancy
- After first 3 months of infant's life

# Maternal vaccination safety summary

- Pregnant women were not specifically included in pre-authorization clinical trials of COVID-19 vaccines
  - Post-authorization safety monitoring and research are the primary ways to obtain safety data on COVID-19 vaccination during pregnancy
- >30,000 self-reported pregnant persons registered in **v-safe**
- The reactogenicity profile and adverse events observed among pregnant women in v-safe did not indicate any safety problem
- Most (73%) reports to VAERS among pregnant women involved non-pregnancy specific adverse events (e.g., local and systemic reactions)
- Miscarriage was the most frequently reported pregnancy-specific adverse event to VAERS; numbers are within the known background rates based on presumed COVID-19 vaccine doses administered to pregnant women

# Fully vaccinated\* people can:

- Visit with other fully vaccinated people indoors without masks or social distancing
- Visit with other unvaccinated people from a single household, if unvaccinated persons are low risk for severe COVID-19, indoors, without masks or social distancing
- Refrain from quarantine and testing following a known exposure to COVID-19 if asymptomatic

\*  $\geq 2$  weeks after the second dose in a 2-dose series (Pfizer-BioNTech or Moderna), or  $\geq 2$  weeks after a single-dose vaccine (Johnson and Johnson [J&J]/Janssen)

# For now, fully vaccinated people should continue to:

- Take precautions in public, including masks and physical distancing
- Avoid medium- and large-sized in-person gatherings
- Get tested if experiencing COVID-19 symptoms
- Follow guidance issued by individual employers
- Follow CDC and health department travel requirements and recommendations

# Vaccination is One Measure to Help Stop the Pandemic

- While COVID-19 vaccines appear to be highly effective, additional preventive tools remain important to limit the spread of COVID-19.
- Both getting a vaccine and following CDC recommendations to protect yourself and others offer the best protection from COVID-19.
  - Cover your nose and mouth with a mask.
  - Stay at least 6 feet from people who don't live with you.
  - Avoid crowds and poorly ventilated indoor spaces.
  - Wash your hands.



# Distribution and Administration

**In early-phase distribution:** COVID-19 vaccines will be administered in **focused areas for priority groups**

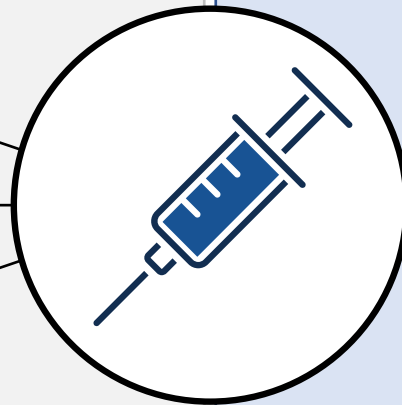
Healthcare Personnel



Long-Term Care Facility Residents



Public Health Clinics



**Later in distribution:** vaccines will be administered to **broader populations** through many different administration sites, with **focus on ensuring equity and expanding access**



Pharmacies



Doctor's Offices



LTC Providers



Home Bound



Mobile Units



Public Health Clinics / FQHCs



Indian Health Service



Other federal entity sites (DOD)



Hospitals



Mass Vx – large outpatient clinics

# Johnson & Johnson's Janssen COVID-19 Vaccine: Considerations for Utilization

## Where?

- Mobile/pop-up clinics
- Newly established vaccine administration sites
- Sites that do not have freezer capacity (e.g. adult HCP offices)

## Who?

- People who want to be fully vaccinated quickly
- People who don't want to return or can't return for a second dose
- Mobile populations or homebound populations

# Essential Workers

## Frontline Essential Workers (~30M)

- First Responders (Firefighters, Police Officers)
- Education (Teachers, Support Staff, Daycare Workers)
- Food & Agricultural Workers
- Manufacturing Workers
- Corrections Officers
- U.S. Postal Service Workers
- Public Transit Workers
- Grocery Store Workers

## Other Essential Workers (~57M)

- Transportation & Logistics
- Food Service
- Shelter & Housing (Construction)
- Finance
- IT & Communication
- Energy
- Media
- Legal
- Public Safety (Engineers)
- Water & Wastewater

**Frontline Essential Workers:** workers who are in sectors essential to the functioning of society and are at substantially higher risk of exposure to SARS-CoV-2

# Interim List of Categories of Essential Workers Mapped to Standardized Industry Codes and Titles

- Interim list to help state, tribal, local, and territorial officials and organizations prepare for the allocation of initially limited COVID-19 vaccine supply.
- List maps essential industries identified by the U.S. Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency (CISA) to [corresponding COVID-19 vaccination phases](https://www.cdc.gov/vaccines/covid-19/categories-essential-workers.html) and workforce categories, as recommended by the Advisory Committee on Immunization Practices.

Table 2. Industries mapped to ACIP Recommended Vaccination Phase 1b

2017 NAICS Code*	2017 NAICS Title	CISA v4.0 Sector	ACIP Recommended Vaccination Phase <sup>†</sup>	ACIP Workforce Category
62423x	Emergency and Other Relief Services	Law Enforcement, Public Safety, and Other First Responders	1b	First Responders
92212x	Police Protection	Law Enforcement, Public Safety, and Other First Responders	1b	First Responders
92216x	Fire Protection	Law Enforcement, Public Safety, and Other First Responders	1b	First Responders
92219x	Other Justice, Public Order, and Safety Activities	Other Community- or Government-based Operations and Essential Functions	1b	First Responders
92214x	Correctional Institutions	Law Enforcement, Public Safety, and Other First Responders	1b	Corrections Workers
11xxxx	Agriculture, Forestry, Fishing and Hunting	Food and Agriculture	1b	Food and Agriculture
311xxx	Food Manufacturing	Food and Agriculture	1b	Food and Agriculture
3121xx	Beverage Manufacturing	Food and Agriculture	1b	Food and Agriculture
44422x	Nursery, Garden Center, and Farm Supply Stores	Food and Agriculture	1b	Food and Agriculture
54194x	Veterinary Services	Other Community- or Government-based Operations and Essential Functions	1b	Food and Agriculture

# Special Considerations and Challenges for Vaccination of Frontline Essential Workers

- Large number of frontline workers
- State and local health authorities may need to sub-prioritize vaccination
- Workers may work in one state but live in another
- Coordination and planning for if, where, and when staff are eligible and can be vaccinated
  - Possible use of worksites to administer vaccine
- Transient workforces or workers whose jobs involve interstate transportation may have difficulty getting 2<sup>nd</sup> dose

# Special Considerations and Challenges for Vaccination of Frontline Essential Workers

- Concerns about vaccine safety among some workers
- Need for culturally appropriate vaccination information in multiple languages
- Rural areas have limited access to health care and health providers
- Methods of communication may be different (e.g. radio, print)
- Rely on community leaders to serve as trusted sources for information
- Some missed days may occur due to post-vaccination side effects
- Critical infrastructure employers have an obligation to manage the continuation of work in a way that best protects the health of their workers and the general public

# Workplace Vaccination Program

- Employers considering implementing a workplace COVID-19 vaccination program should contact the [health department in their jurisdiction](#) for guidance.
- The planning process should include input from management, human resources, employees, and labor representatives.
- Other important preliminary steps include:
  - Obtaining senior management support
  - Identifying a vaccine coordinator
  - Enlisting expertise from local public health authorities, occupational health providers, and pharmacies
- Offer the vaccination at no charge and during work hours.
- Offer flexible paid leave policies for those workers that may experience post-vaccination symptoms.

# Encourage Employees to Get Vaccinated

- If your business can't offer COVID-19 vaccinations on site, encourage employees to seek COVID-19 vaccination in their community and provide them with information about where they can get the vaccine.
  - Be flexible in your human resources policies. Establish policies that allow employees to take paid leave to seek COVID-19 vaccination in the community. Support transportation to off-site vaccination clinics.
  - Use [promotional posters/flyers](#) to advertise locations offering COVID-19 vaccination in the community. Display posters about COVID-19 vaccination in break rooms, cafeterias, and other high traffic areas.
  - Post articles in company communications (e.g., newsletters, intranet, emails, portals) about the importance of COVID-19 vaccination and where to get the vaccine in the community.



# CDC Vaccine Task Force/Essential Workers Team

- **Mission**

- Focuses on vaccine implementation for essential workers through linkages with workers, industry, labor, and other stakeholders

- **Strategic Efforts**

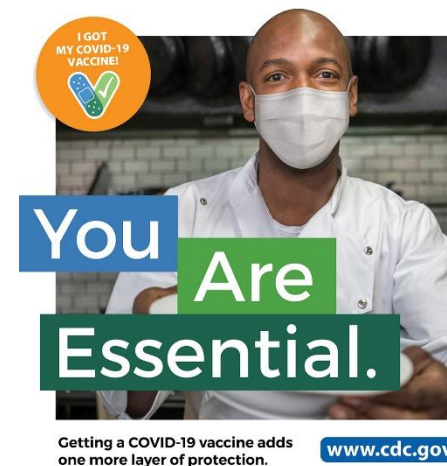
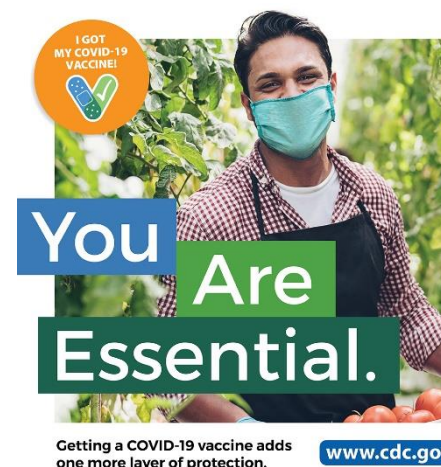
- Disseminating information to enhance vaccine confidence in essential workers
- Supporting jurisdictions to implement vaccination strategies for essential workers

# COVID-19 Vaccine Communication Toolkit for Essential Workers

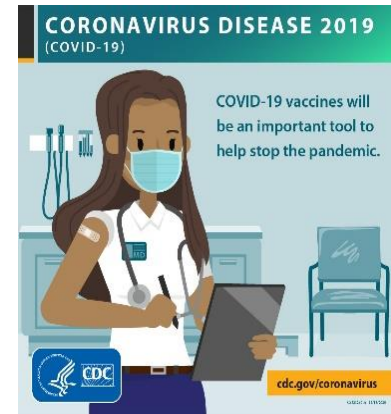
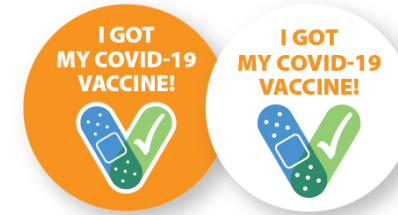
This toolkit will help your organization educate community members about COVID-19 vaccines, raise awareness about the benefits of vaccination, and address common questions and concerns.

- Key messages
- Slide deck
- Frequently Asked Questions
- Posters/Flyers
- Newsletter Content
- Letter to Members
- Social Media Content

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/toolkits/essential-workers.html>



# COVID-19 Vaccine Implementation



- This is an **exciting and historic time**, but the work is far from over.
- There will be **unanticipated challenges**, but CDC will continue to work closely with you, our partners, to **find solutions and overcome obstacles**.
- Vaccines are an important tool to control the pandemic, but we need to continue to message the importance of **masks, social distancing, and hand washing, even post-vaccination**.
- After vaccination of essential workers, **workplace safety and health protections implemented for the pandemic need to remain in place**.

# Protect Yourself, Your Family, Your Friends, Your Co-workers, and Your Community.

## Get vaccinated.

- Choose to get vaccinated when it is offered.
- Participate in **v-safe** and help CDC monitor for any health effects after vaccination.
- Share your experience with coworkers, friends, and family.
- Know the basics about the COVID-19 vaccine. Help answer questions from your family and friends.
- Show you received the vaccine by wearing a sticker or button prominently.



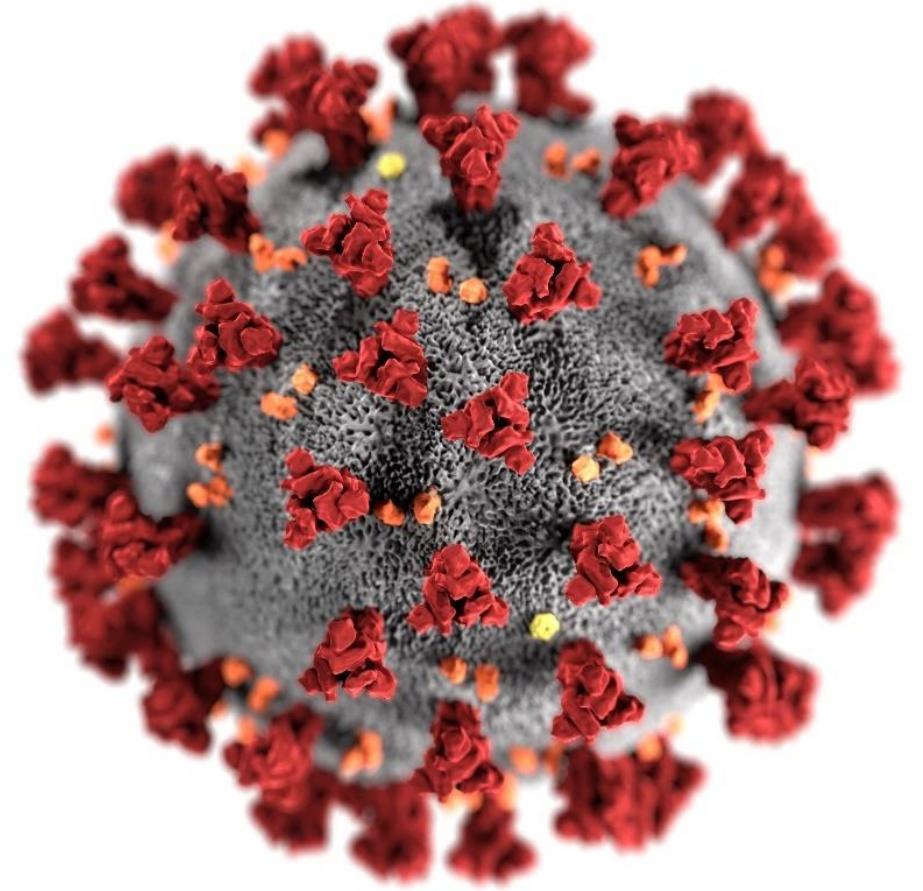
# Thank you



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.

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# Other CDC COVID-19 maternal vaccination safety activities

- Vaccine Safety Datalink (VSD)
  - COVID-19 vaccination coverage in pregnant women
  - Risk of miscarriage and stillbirth following COVID-19 vaccination
  - Safety in pregnancy
    - Acute adverse events in pregnancy, longer-term safety assessment of acute adverse events, pregnancy complications and birth outcomes, and infant followup for the first year of life
- Clinical Immunization Safety Assessment (CISA) Project
  - Prospective observational cohort study
    - Adverse pregnancy and birth outcomes, serious adverse events, local and systemic reactogenicity, infant health outcomes for first 3 months of life

# Collaboration between CDC and FEMA

- **Expanding partnership between CDC and FEMA on key objectives**
  - Coordination with FEMA around their Community Vaccination Centers
  - Ensuring support for vaccine sites, delivery of doses, and equitable access to vaccines
  - Coordination with regional, state, tribal, and territorial authorities, private sector partners and others to assist with vaccine distribution
- CDC is working closely with FEMA colleagues at National, Regional and Jurisdictional levels to provide holistic federal support to jurisdictional activities and address jurisdictions-specific challenges

# Retail Pharmacy Program

- 21 national pharmacy partners and network administrators enrolled
- Provides a COVID-19 vaccination provider network of **over 40,000 store locations**
- Given supply constraints, could not activate this program all at once.
  - **Incremental roll out** in close coordination with jurisdictions
  - Initial pharmacy partners were selected based on their ability to reach select target populations and serve socially vulnerable populations.
- As supply increases, additional pharmacy locations will be allocated vaccine, until the entire network is activated.

# Health Center COVID-19 Vaccine Program

- Purpose: To ensure underserved communities and those populations disproportionately affected by COVID-19 are equitably vaccinated.
- Directly allocate a limited supply of vaccine to select HRSA-funded health centers
- Health centers chosen in the initial phase include those that serve a large volume of one of the following disproportionately affected populations:
  - Public housing residents
  - Migrant/seasonal agriculture workers
  - People with limited English proficiency
  - People experiencing homelessness

# Visits between fully vaccinated people & unvaccinated people

- Recommendation for prevention measures depends on:
  - Underlying risks for severe COVID-19 among unvaccinated people and members of their households
  - Number of households with unvaccinated persons

## No Prevention Measures Needed

- Unvaccinated people are from a *single* household & are at *low risk* of severe COVID-19

## Prevention Measures Needed

- Unvaccinated people are from a *single* household & at *high risk* for severe COVID-19
- Unvaccinated people are from *multiple* households