

CDC's Vaccine Safety Communications

Daniel B. Jernigan, MD, MPH

Director, National Center of Emerging Zoonotic and Infectious Diseases

January 10, 2025



Outline

- **CDC's vaccine safety communications**
- **Communicating vaccine safety during the COVID-19 Public Health Emergency**
- **Lessons learned**

Overview of CDC Vaccine Safety Communications

Vaccine Safety Communications

- **Objective:**
 - To provide clear, consistent, and evidence-based information about the safety of post authorization and post licensure vaccines to **educate all audiences** and **build trust** in vaccine safety programs and systems in the United States.
- By using **established communication principles** to deliver accurate, credible, and timely vaccine safety communication.

Vaccine Safety Communications Efforts

- **Vaccine safety communication efforts are deliberate approaches designed to effectively share accurate, evidence-based information about vaccine safety while addressing concerns and building trust. This includes**
 - Transparency
 - Proactive engagement
 - Audience-specific messages
 - Collaboration with trusted messengers
 - Consistent messaging that aligns with risk communication research and best practices
 - Combatting misinformation


Vaccine Safety at CDC

- Located within the Division of Healthcare Quality Promotion in the National Center for Zoonotic and Emerging Infectious Diseases
 - Immunization Safety Office (ISO)
 - 50 FTEs
 - 33 Contractors
 - ISO Health communications team
 - 2 FTEs
 - 5 Contractors

About Division of Healthcare Quality Promotion

AT A GLANCE

The Division of Healthcare Quality Promotion (DHQP) works to protect patients and healthcare workers through safe healthcare delivery systems in the United States and abroad.



Our mission

ON THIS PAGE

Our mission

The mission of the Division of Healthcare Quality Promotion (DHQP) is to:

- Protect patients.
- Protect healthcare personnel.
- Promote safety, quality, and value systems.


CDC Vaccine Safety Q SEARCH

Safety Information by Vaccine Common Vaccine Safety Questions and Concerns Vaccine Recalls: FAQs

Historical Concerns VIEW ALL >

Safety Information by Vaccine
U.S. vaccines safety studies, common side effects, vaccine information statements and more.

Learn More >



For Healthcare Providers

[Vaccine Safety](#) | [Vaccine Safety](#) | [CDC](#)

Vaccine Safety Communication at CDC is Cross-Cutting

Vaccine
Information
Statement (VIS)

Advisory
Committees
(e.g., ACIP)

Global healthcare
provider & partner
training

Domestic
healthcare
provider &
partner training

Vaccine guidance
for healthcare
providers

Emergency
response

Support to state
and local health
departments

Resources for
specific
populations (e.g.,
older adults)

Responses to
public inquiries

Travelers'
vaccine
guidance

Immigrant and
refugee health
guidance

Vaccine Safety Communication with Partners

Healthcare Quality and Worker Safety Information



Healthcare Systems

Respiratory Virus Season Resources

CDC Vaccine Safety Monitoring Updates — CDC continues to get questions about [COVID-19](#). To date, almost 700 million doses of COVID-19 vaccines have been given in the United States, and monitoring in multiple safety systems continues to show they are safe. Some common COVID-19 concerns are addressed below.

- **Safety Monitoring.** CDC's [vaccine safety monitoring systems](#) are designed to be sensitive and assessment of potential safety signals and the communication of safety information to how the vaccine safety monitoring process is working successfully.



COCA Now

CDC Clinician Outreach
and Communication Activity

January 22, 2024

Information on Respiratory Syncytial Virus (RSV) Vaccine Administration Errors in Young Children and Pregnant People

Vaccine administration errors are known to occur and are routinely monitored through the Reporting System (VAERS). Since approval of RSV vaccines and [nirsevimab](#), the Centers for Disease Control and Prevention (CDC) and the U.S. Food and Drug Administration (FDA) have received reports of the [Arexvy](#) RSV vaccine being administered in error to young children and pregnant people. The CDC has also received reports of the GSK RSV vaccine (Arexvy) being administered in error to pregnant people. As of January 17, 2024, the number of reports received by VAERS suggests that these types of errors are uncommon in young children less than 2 years of age (25 reports) and pregnant people (128 reports) relative to an estimated 1 million infants protected from RSV either through infant receipt of [nirsevimab](#) or through vaccination of pregnant people.²

Clinicians

Partner Network Digest

Partnering for
Vaccine Equity



This newsletter is developed for organizations that receive funding through CDC's Immunization Services Division. The Partner Network Digest provides our funded partners with important updates, tools, and resources.

Early Safety Findings Among Persons Aged ≥60 Years Who Received a Respiratory Syncytial Virus Vaccine

Test the safety of the RSV vaccine seen in clinical trials among older-than-expected numbers.

Immunization Implementation Partners

Vaccine Safety Communication with the Public

CDC
September 29, 2023

Whooping cough is a highly contagious disease that can be prevented by Tdap vaccination. Protect yourself and your newborn by getting Tdap vaccine during your third trimester. A new CDC study provides further evidence that getting Tdap vaccine during pregnancy is safe. Learn more: <https://bit.ly/47rqYY9>

Whooping cough is highly contagious.

Tdap vaccine is **safe** for pregnant people.

Protect newborns by getting Tdap vaccine during the third trimester.

[cdc.gov/vaccinesafety](https://www.cdc.gov/vaccinesafety)

366 75 comments 99 shares

Focused Social Media

<https://www.cdc.gov/vaccine-safety/about/index.html>

About Common Vaccine Safety Questions and Concerns

WHAT TO KNOW

Each of us is our own best health advocate. Many times, our loved ones depend on us for information and protection too. With so much information – and sometimes incorrect information – available today, learning the facts before making health decisions is very important. These pages will help answer common questions about vaccine safety.

TABLE OF CONTENTS | QUESTIONS AND CONCERNS

- Adjuvants
- Autism
- Fainting
- Febrile Seizures
- Guillain-Barré Syndrome (GBS)
- Multiple Vaccines at Once

SHOW MORE

General Public

VACCINE INFORMATION STATEMENT

HPV (Human Papillomavirus) Vaccine: What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

4. Risks of a vaccine reaction

- Soreness, redness, or swelling where the shot was given.
- Fainting or feeling lightheaded after HPV vaccination.
- Allergic reactions after medical procedures,

6. The National Vaccine Injury Compensation Program

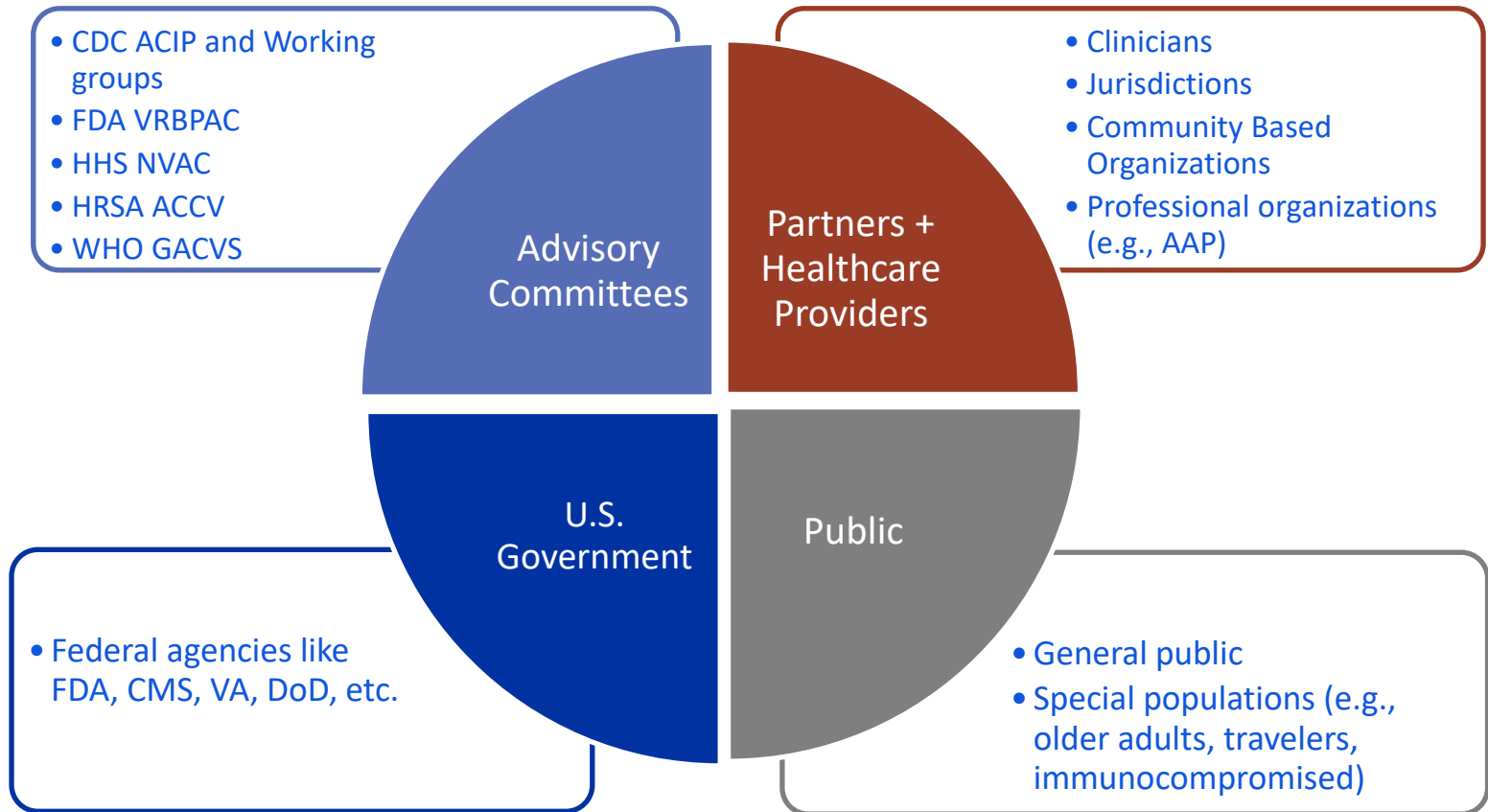
The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or

Vaccinated
Individuals

Key Vaccine Safety Interagency Partners



Communicating Vaccine Safety: Key Audiences



Communication from CDC on Vaccine Safety Information to Various Audiences

Federal Agencies

- Near daily contact about safety issues
- Formal briefings

Advisory Committees

- Work group meetings
- Presentations

Partners (including healthcare providers)

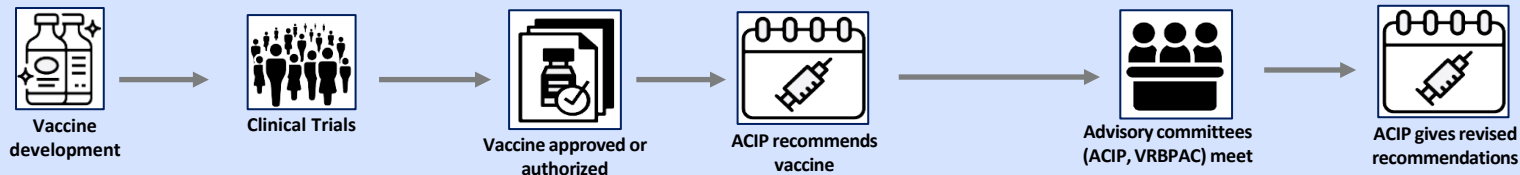
- Partner newsletters
- Dear Provider letters
- COCA calls
- HCP-focused outlets (e.g., Medscape)
- Trainings
- Website
- Guidance/Interim Clinical Considerations/Recommendations

Public

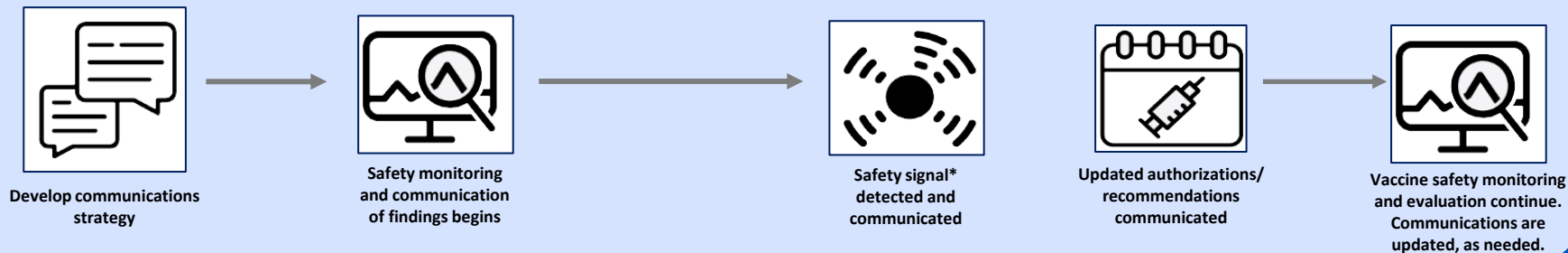
- Website
- Vaccine Information Sheet (VIS)
- Social media
- Messages for specific populations (e.g., pregnancy)
- Videos
- Print materials
- Through traditional media

Overview of Vaccine Safety Communication Activities

Vaccine Timeline

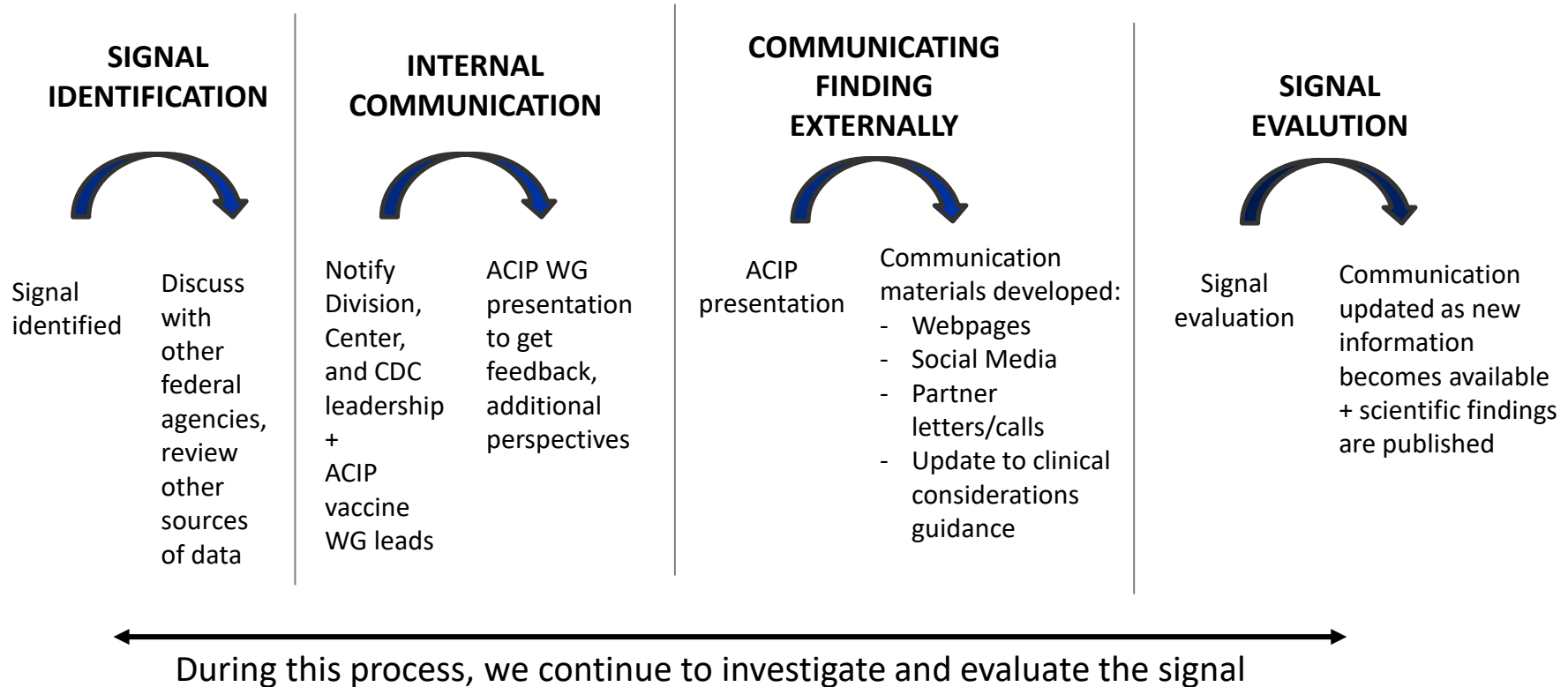


Vaccine Safety Communications Activities



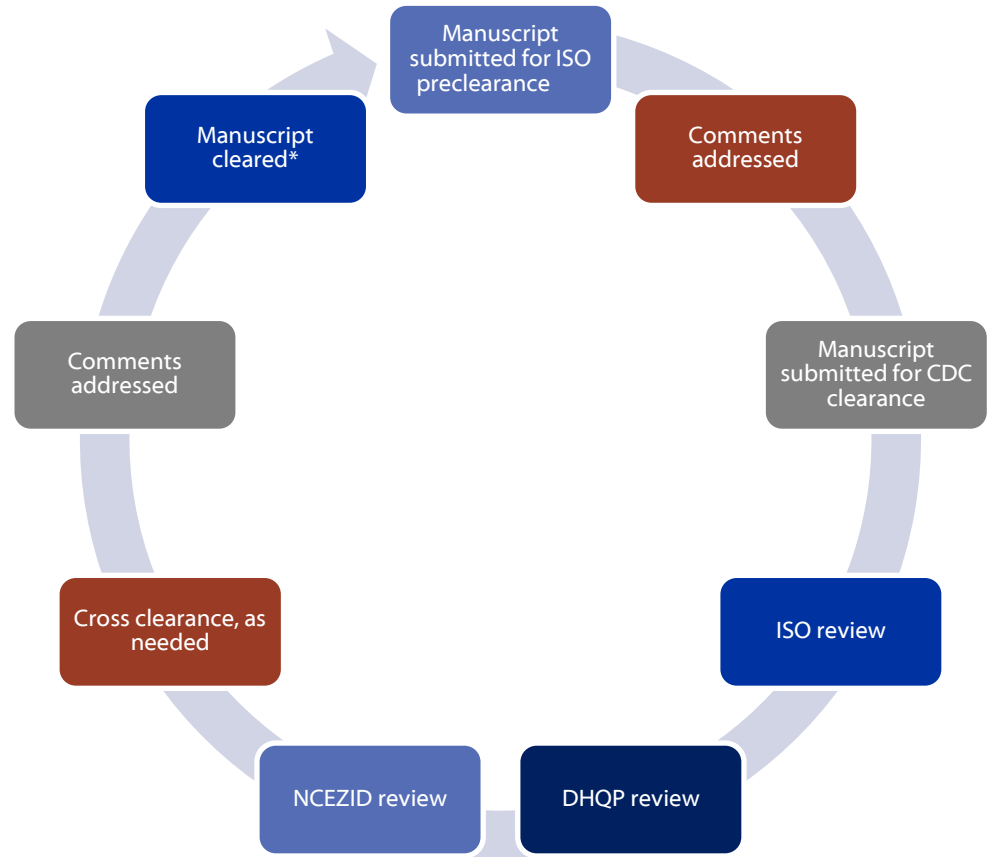
*Signal: a statistical association found in vaccine safety monitoring; it does not mean there is a true association and requires investigation and evaluation.

When a Vaccine Safety Signal is Identified: General Communication Process



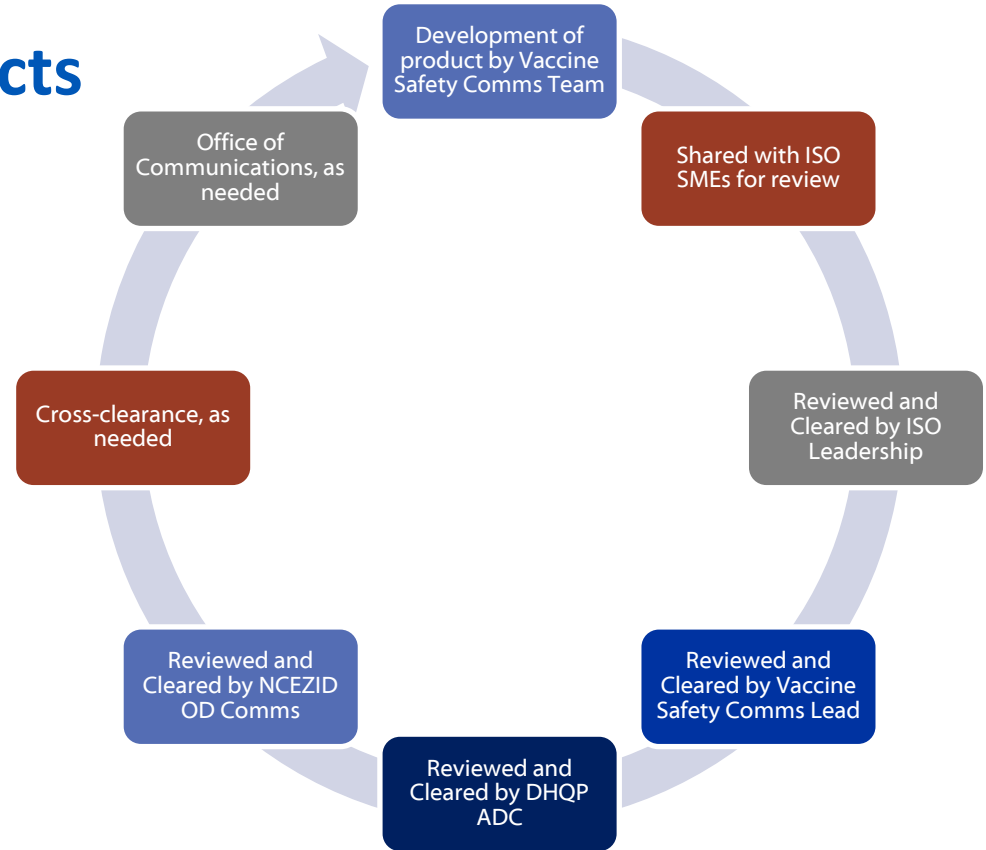
Clearance Process for Manuscripts

- Clearance is required for all documents where CDC is engaged
- Level of clearance needed depends if CDC co-authors are included
- Average length in clearance: 4-6 weeks
 - Urgent reports (e.g., MMWRs) can be expedited



Clearance Process for Communications Products

- All products developed are reviewed and cleared
- Development of products with SMEs is an iterative process
- Level of clearance within CDC depends on the product



Vaccine Safety Communications during the COVID-19 Public Health Emergency

COVID-19 Vaccine Safety Team

CDC's COVID-19 Vaccine Safety Team and COVID-19 Vaccine Communication Team were part of the COVID-19 Vaccine Task Force, which also handled vaccine distribution, pharmacy and long-term care logistics, jurisdictional support, and more.

COVID-19 Vaccine Safety Team (VST)

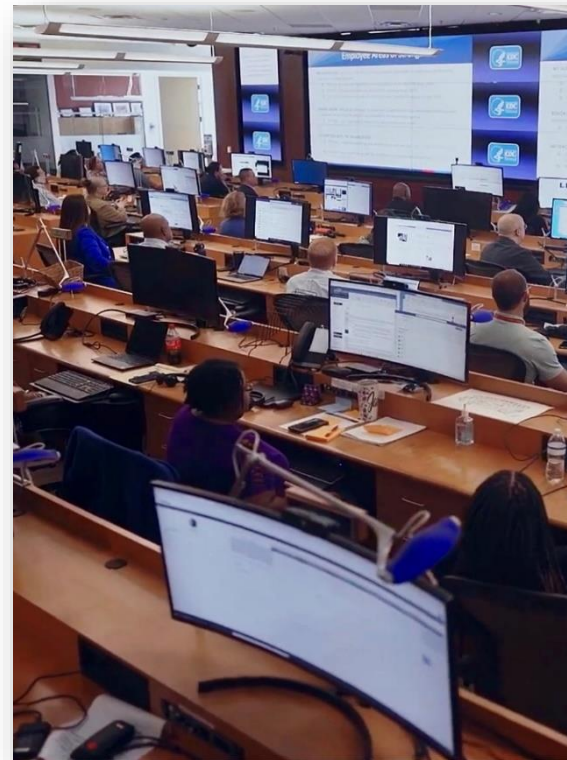
- ISO staff deployed to this team
- Relied on rotating deployers
 - > 200 deployers to the VST during the Response
 - Typically 6-8 week deployments
- Spring 2022: Response activities transition to program (ISO)

COVID-19 Vaccine Communications Team

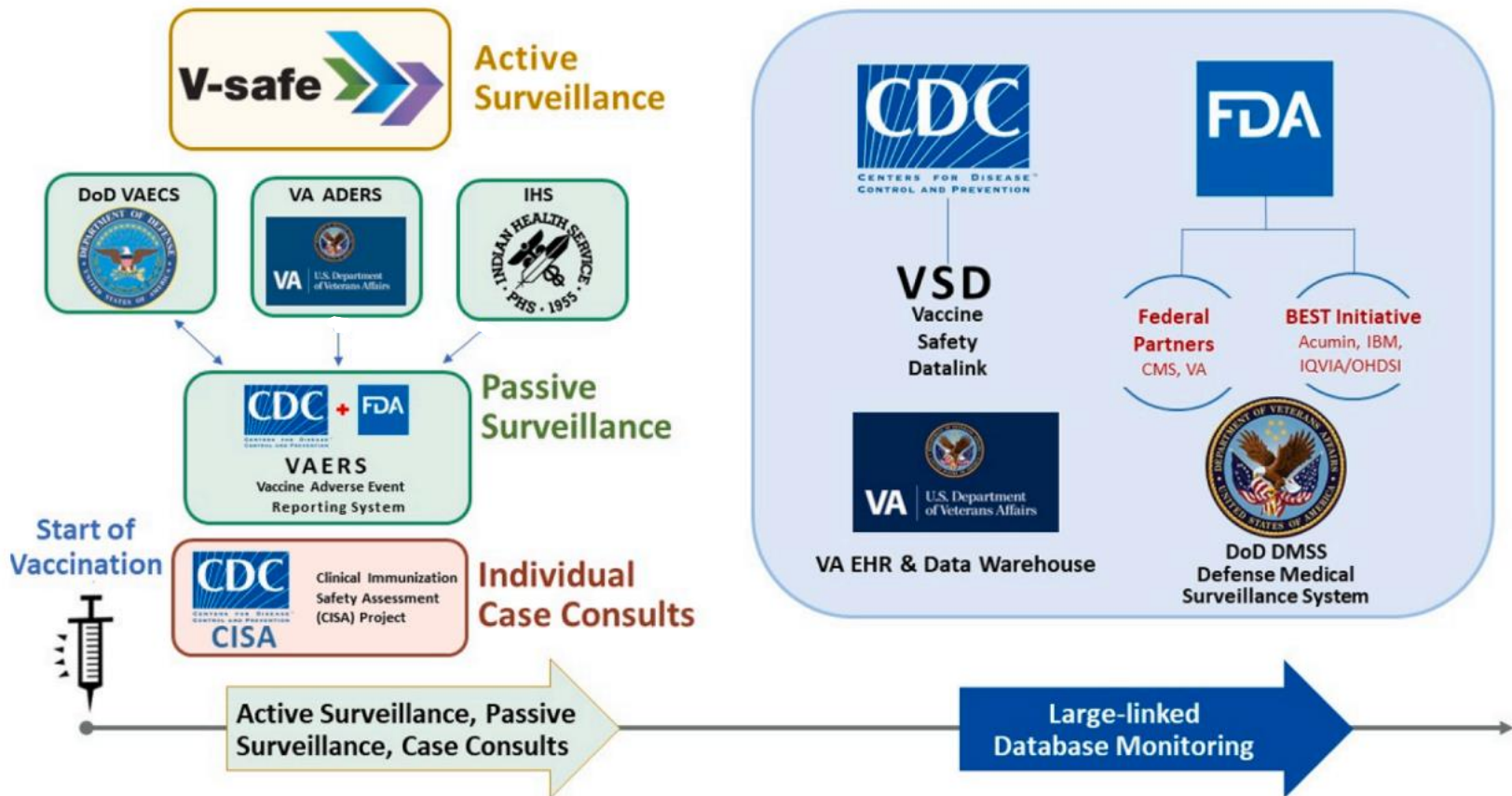
- Worked closely with COVID-19 Vaccine Safety Team on vaccine-related communications
- October 2020- Spring 2022: Deployment of health communication specialists within CDC
- Team size varied from 2-10 deployers
 - Typically 4-8 week deployments
- Summer 2021: Permanent FTE and DHQP contracted staff dedicated vaccine safety communications

CDC Joint Information Center (JIC)

- Central point of information coordination and emergency risk communication during major CDC responses
- Key functions:
 - Centralize response communications
 - Develop response communications strategy
 - Staffing
 - Engage with clinician and non-clinician partners
 - Response clearance
 - Research and evaluation



COVID-19 Vaccine Safety Monitoring Plan and Timeline

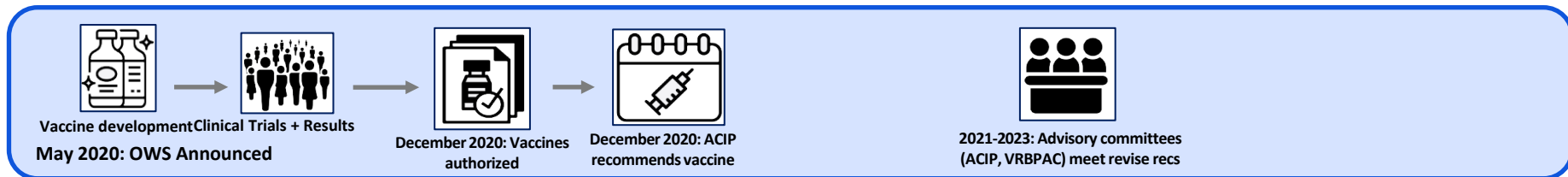


Development and Communication of a Vaccine Safety Monitoring Plan

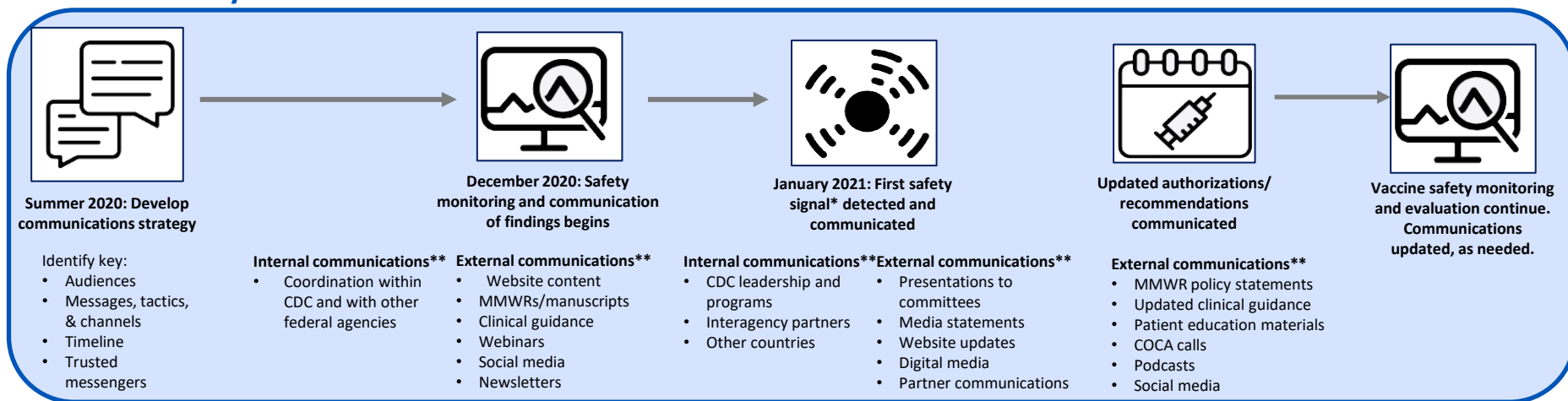
- **Interagency vaccine safety monitoring was coordinated with partners**
 - Developing a common core list of Adverse Events of Special Interest for monitoring
 - Sharing information on safety monitoring plans, including methods
- **Updates on the vaccine safety monitoring plan given to HHS/CDC leadership and Advisory Committees**
 - Regular updates to ACIP Vaccine Safety Technical (VaST) Work Group
- **COVID-19 vaccine safety webpages were kept updated**
 - Description of federal safety monitoring systems and general vaccine monitoring activities
 - Posting of COVID-19 vaccine safety SOPs and protocols

Preparing for the National COVID-19 Vaccination Program

Vaccine Timeline



Vaccine Safety Communications Activities



Education and Communication on U.S. COVID-19 Vaccine Safety Systems



**Get vaccinated.
Get your smartphone.
Get started with v-safe.**

Use your smartphone to tell CDC about any side effects after getting the COVID-19 vaccine. You'll also get reminders if you need a second vaccine dose.

When you get your COVID-19 vaccination, ask your provider how to get started with v-safe.

Learn more about **v-safe**
www.cdc.gov/vsafe

Roadshow for V-Safe



DO YOUR PART
for Vaccine Safety —
Report to VAERS.

Vaccine Adverse Event Reporting System

Public Outreach

CDC FDA www.vaers.hhs.gov

COVID-19 Vaccination Toolkits

Get audience-specific toolkits that will allow you, your health care team and other staff to:

- Build confidence about COVID-19 vaccination among your healthcare teams and staff.
- Provide your health professionals with tools they can use to educate patients and answer questions.
- Provide proper storage and handling information to your audience. Remember: all vaccination providers participating in the COVID-19 Vaccination Program must store and handle COVID-19 vaccines under proper conditions to maintain the cold chain as outlined in the toolkit and addendum.

Vaccination Communication Toolkit
For Medical Centers, Clinics, and Clinicians
Build confidence about COVID-19 vaccination among your healthcare teams and other staff.

Recipient Education Toolkit
For Healthcare Providers
Educate vaccine recipients about COVID-19 vaccination.

Long-Term Follow-up Toolkit
For LTCF Administrators
Prepare staff to manage long-term follow-up for vaccinees.

Storage and Handling Toolkit
The Vaccine Storage and Handling Toolkit has been updated with a COVID-19 Vaccine Addendum with information on Storage and Handling best practices for COVID-19 vaccines.

Website Resources
LTCF toolkit

To Request a COVID-19 CISA Clinical Consultation

Healthcare providers or health departments in the United States can request a consultation from **CISA COVIDvax** for a complex COVID-19 vaccine safety question that is (1) about an individual patient residing in the United States or vaccine safety issue and (2) not readily addressed by CDC or [Advisory Committee on Immunization Practices \(ACIP\)](#) guidelines.

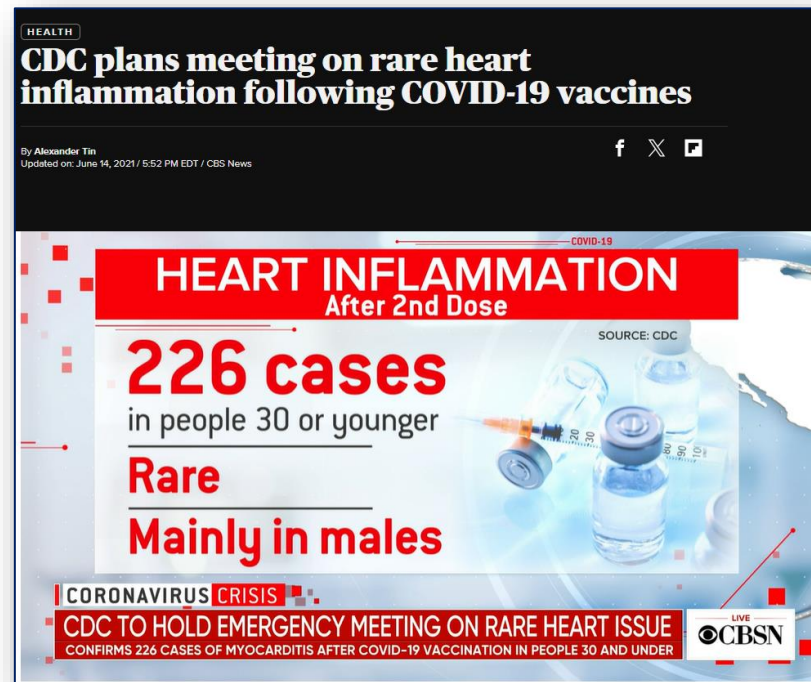
This request can be made through **CDC-INFO** by:

- Calling 800-CDC-INFO (800-232-4636), or
- Submitting a request via [CDC-INFO webform](#)

Dear Provider Letter

Continuous Updates to CDC's ACIP

- **Between December 2020-May 2023:**
 - 27 ACIP meetings on COVID-19 vaccines
 - 17 VaST assessments
 - 18 COVID-19 vaccine safety presentations from CDC systems
- **Associated communication activities**
 - Internal briefing documents
 - Media interviews
 - Prepared responses for CDC Info
 - Webpage updates
 - Interim clinical consideration updates
 - Social media posts
 - Communications with partners



Vaccine Safety Monitoring Findings

- **Public presentations**
- **106 Publications**
 - Including 28 MMWRs
- **Each presentation and publication had a communications plan**
 - Key messages, planned outreach, media statement
- **Website updates**
 - Select Adverse Events Reported after COVID-19 Vaccination detailed adverse events like anaphylaxis, TTS, etc.

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

COVID-19

Selected Adverse Events Reported after COVID-19 Vaccination
Updated May 18, 2021 [Print](#)

Safety of COVID-19 Vaccines
Results from safety monitoring show only mild side effects a

COCA Call
CDC Clinician Outreach and Communication Activity

**COVID-19 Vaccines:
Update on Allergic Reactions,
Contraindications, and Precautions**

Data support the safety of COVID-19 vaccination for children ages 6 months to 5 years*
More than 1 million children were vaccinated; reports of serious adverse events were rare**

Most reported reactions were mild or moderate:

- Pain in the arm where the shot was given
- Irritability
- Crying
- Sleepiness

No reports of myocarditis†

Everyone ages 6 months and older should receive recommended COVID-19 vaccines to protect against severe illness and death

* Study of 21,913 children enrolled in a safe and 647 reports received and processed by VAERS — United States, June 18–August 21, 2022
** 18 serious reports for myocarditis (other myocarditis), sudden cardiac arrest, and death. Serious reports are classified as "serious" only if one of the following events are reported: hospitalization, prolongation of hospitalization, life-threatening illness, permanent disability, congenital anomaly, or death.
† Myocarditis, or inflammation of the heart muscle, is a rare adverse event that has been associated with mRNA COVID-19 vaccines.

[btlj/mm/7125a3](https://www.cdc.gov/mmwr/7125a3)
SEPTEMBER 2, 2022

MMWR

Promotion of Vaccine Safety Monitoring Systems

Mandy K. Cohen, MD, MPH
@CDCDirector

#COVID19 vaccines are being administered under the most intensive vaccine safety monitoring in U.S. history. Nationwide vaccine safety networks include:

- v-safe
- VAERS
- CISA
- Vaccine Safety Datalink

More on CDC's comprehensive monitoring: bit.ly/3sMKvxc

U.S. Vaccine Safety Surveillance



Clinical Immunization Safety Project (CISA)



12:35 PM · Feb 9, 2022




Enroll in V-safe and tell CDC how you're feeling after vaccination.

cdc.gov/vsafe



IS THE SYSTEM WORKING?

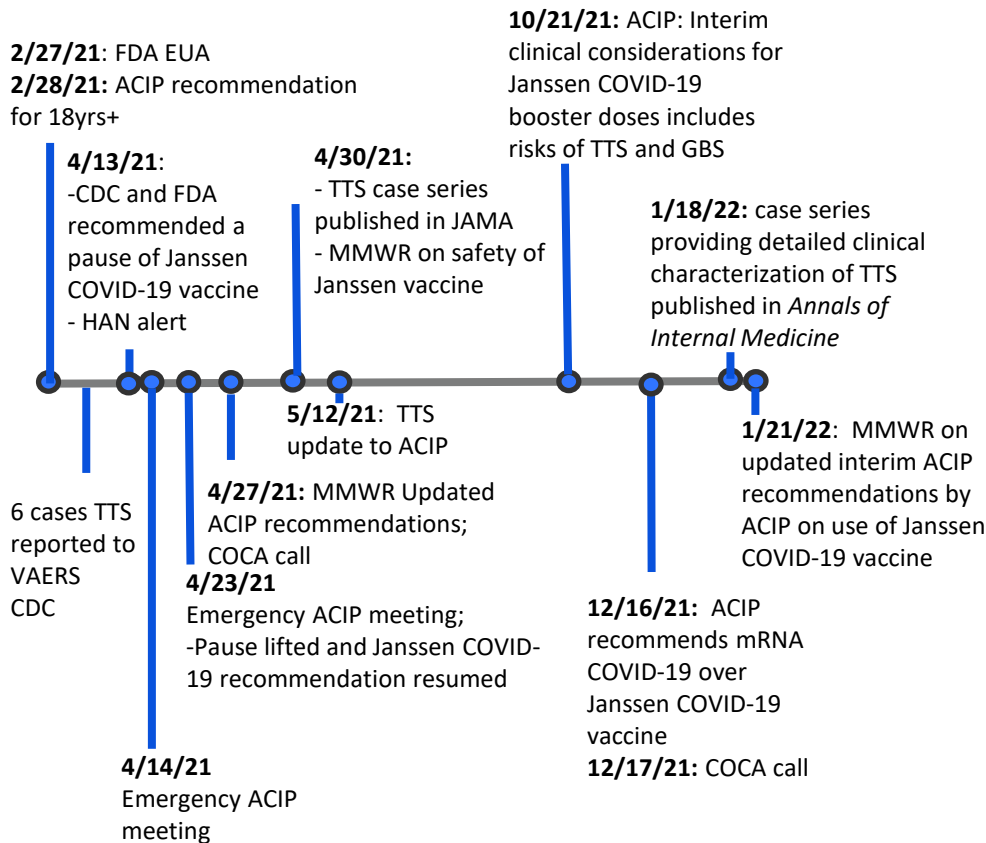
Yes. This pause on Johnson & Johnson's COVID-19 Vaccine shows that safety monitoring systems, like the Vaccine Adverse Event Reporting System (VAERS), are working efficiently to detect unusual or unexpected patterns of adverse events.



cdc.gov/coronavirus

COVID-19-16-0419-0001

Experience with Thrombosis with Thrombocytopenia Syndrome (TTS) after Janssen COVID-19 Vaccine



Communication to healthcare professionals and the public was critical



Addressing Myths and Facts about COVID-19 Vaccines

- **Social listening conducted that informed CDC about vaccine safety concerns**
 - COVID-19 State of Vaccine Confidence Report
 - Posted on CDC's website
- **Dedicated CDC webpage for COVID-19 myths and facts**

COVID-19 vaccines do not contain microchips and they cannot make you magnetic.

FACT

Vaccines are developed to fight against disease.



Vaccines work by stimulating your immune system to produce antibodies. After getting vaccinated, you develop immunity to that disease, without having to get the disease first.

COVID-19 vaccines are not administered to track your movement. They are free from manufactured products such as microelectronics, electrodes, carbon nanotubes, and nanowire semiconductors.

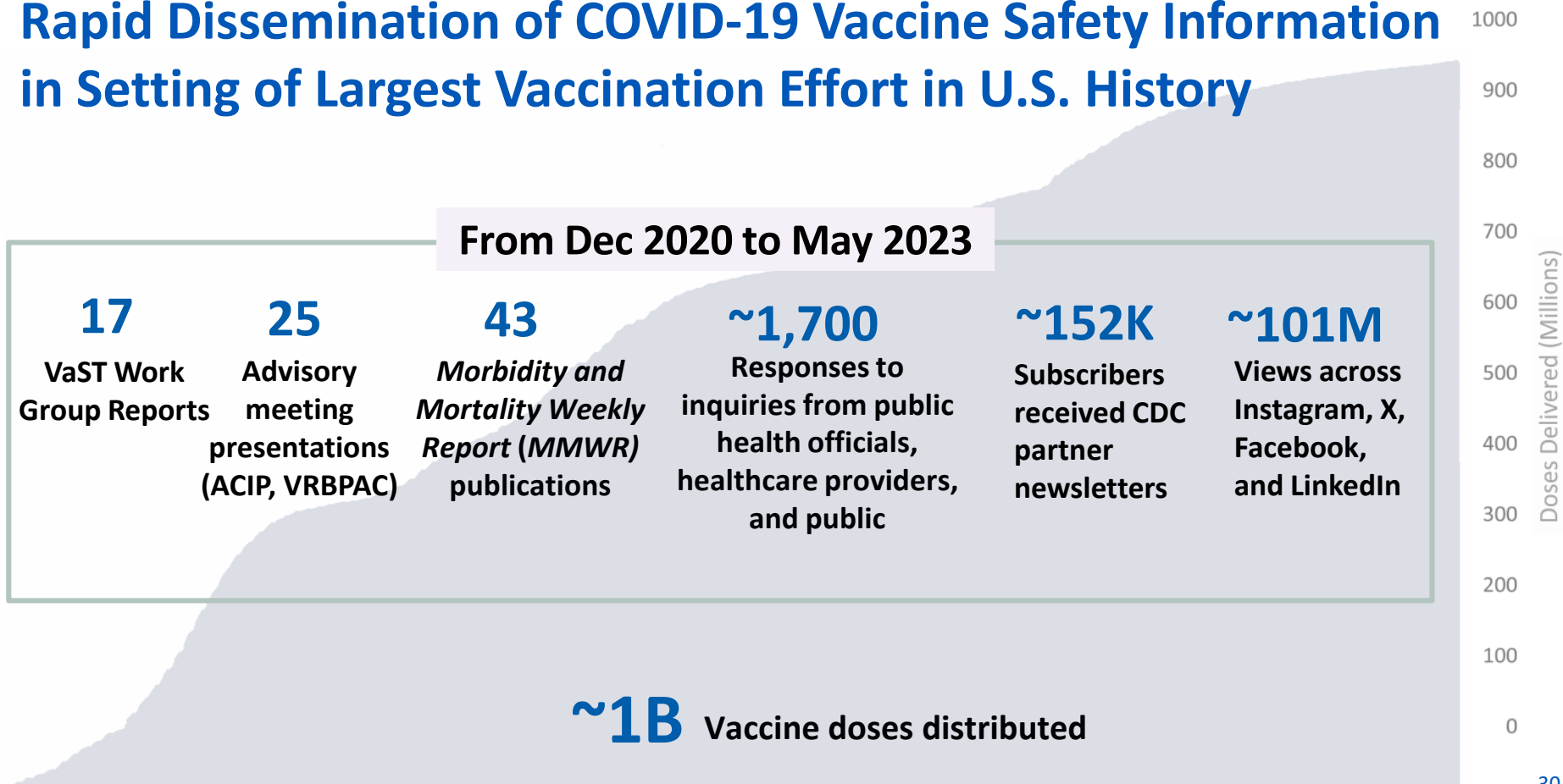
COVID-19 vaccines are free from metals such as iron, nickel, cobalt, lithium, and rare earth alloys. They do not contain ingredients that can produce an electromagnetic field at the site of your injection.

Learn more about the ingredients in the COVID-19 vaccinations authorized for use in the United States.

Vaccine Safety: Getting Out the Message

- **CDC's website**
- **Social media**
 - General audiences: Instagram, Facebook, X (formerly Twitter)
 - Healthcare professional audiences: LinkedIn
- **Healthcare provider outlets like Medscape and Doximity**
- **Partner calls and webinars**
- **Podcasts**
- **Videos**

Rapid Dissemination of COVID-19 Vaccine Safety Information in Setting of Largest Vaccination Effort in U.S. History



Lessons Learned from COVID-19 Public Health Emergency

Lessons Learned

- **Importance of risk communication**
 - Growing hesitancy, decreased confidence, and rumors emphasized the need to have clear, transparent, and timely vaccine safety messaging
 - Using new and non-traditional trusted messengers to relay vaccine safety information
 - Need to have a multi-pronged approach to sharing vaccine safety information
 - No one-size-fits-all approach
 - Vaccine safety concerns differ among populations
- **Vaccine safety communications requires specialized understanding**
 - Timely recruitment and hiring is essential
- **Communication research is important to inform messaging**

Current Communications Projects: Informing Future Vaccine Safety Messaging

- **Aiming to understand our audiences better:**
 - Knowledge and understanding of vaccine safety monitoring systems
 - Perceptions of safety: vaccines compared to other health-related products
 - Assessments of vaccine safety discussions between patient and provider
 - Identification of new dissemination channels for vaccine safety messaging and materials to reach targeted populations
- **Expected outcomes:**
 - Refine vaccine safety messages
 - Optimize other types of communications on vaccine safety

Recent Research Suggest More Nuanced Communication is Needed

- **Skepticism Towards Vaccines:** Unvaccinated adults largely doubt the health benefits of COVID-19 vaccines, fearing medium to high risks of side effects (Pew Communications Research, May 2023).
- **Critical Perceptions:** Vaccine-hesitant individuals reject absolute terms like "best" and "safest," and view vaccination calls-to-action as guilt-inducing (Johns Hopkins, May 2023).
- **Communication Challenges:** Phrases like “trust the science” alienate those skeptical of scientific authority; emphasis on evolving knowledge may enhance receptivity (CDCF contracted research, January 2024).

Results of Recent CDC Vaccine Safety Focus Groups with Current and Expecting Parents

- Respondents are **sensitive to ambiguous language** in vaccine communications, often dissecting claims and questioning their credibility. Language that lacks specificity, such as "routinely" or "generally," can provoke skepticism, especially among those who are already hesitant about vaccines.
 - There is considerable resistance to blanket, absolute statements like "safe and effective". Messaging that acknowledges the complexities of vaccines resonates more.
- **Clear and definitive language like "transparent", "long-lasting" and "long-standing" is viewed positively** by respondents. These terms are seen as providing detailed information and instilling confidence in the vaccine monitoring process.
- **References to "talk to your healthcare provider" are often dismissed by vaccine-hesitant respondents**, who express skepticism about the advice of healthcare professionals.

Communicating Vaccine Safety

- **Vaccines are the best protection** we have against infectious diseases.
- **The benefits of vaccines far outweigh the risks.** As science continues to advance, we strive to develop safer vaccines and improve delivery to protect ourselves against disease more effectively.
- **COVID-19 vaccines are the best way to protect your child from severe illness.**
- Hundreds of millions of people in the U.S. have **safely received COVID-19 vaccines.** COVID-19 vaccines are closely monitored by multiple U.S. vaccine safety systems.
- **Rotavirus vaccines safely protect children** from severe watery diarrhea, vomiting and hospitalizations.
- Did you know? The United States' long-standing **vaccine safety systems ensure that the benefits of vaccination far outweigh the risks.**

Conclusion

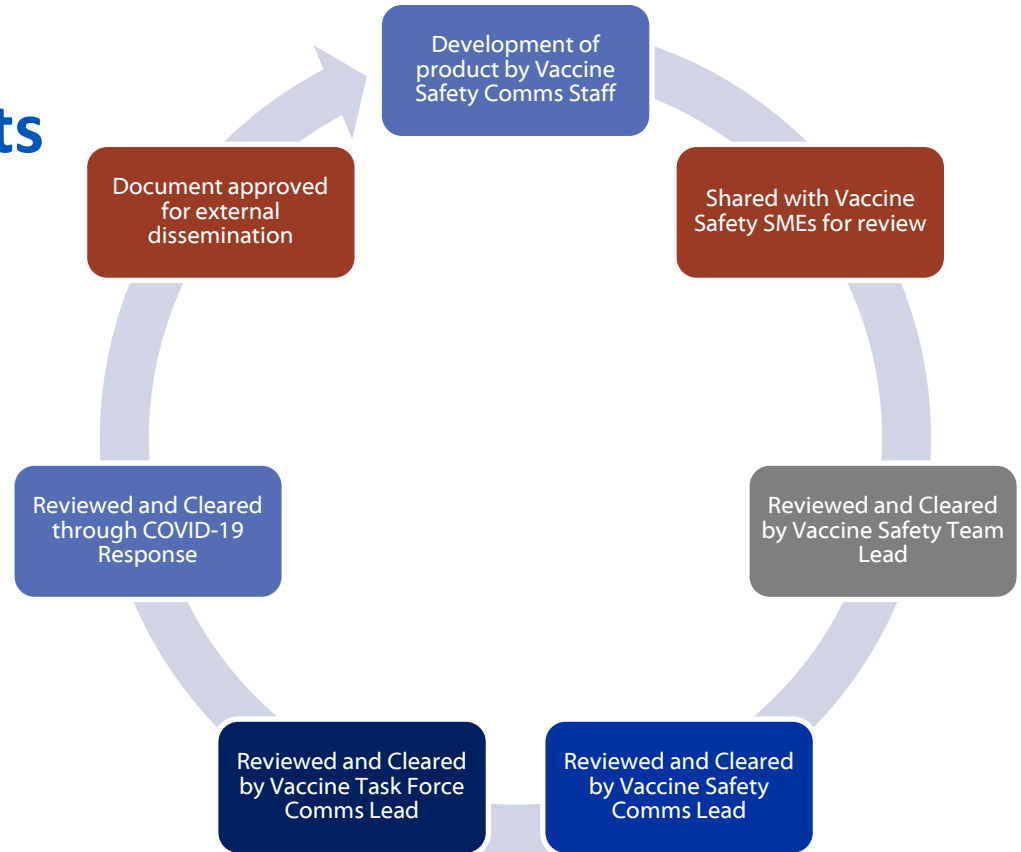
- CDC communicates evidence-based information about vaccine safety to various audiences
- Lessons learned from the COVID-19 response are guiding CDC to improve communication efforts



Backup slides

Developing COVID-19 vaccine safety communication products

- **Similar process as non-emergency documents**
 - Clearance chain differs
- **Review ensures:**
 - Documents align with CDC policies
 - Plain language
 - Clearly understandable
 - Considers equitable graphics



Communicating Findings from ISO Vaccine Safety Studies

- **Manuscript accepted for publication**
- **Communications rollout plan developed**
 - May include talking points, social and other media plan, draft social media posts
- **Updating federal partners**
- **Publication of manuscript**
- **Notification of partners through newsletters**
- **Depending on findings:**
 - Website updates
 - Updates to interim clinical considerations guidance
 - Digital media (social, emails to vaccine safety distribution list)

Federal and International Advisory Committees



Advisory Committee on Immunization Practices (ACIP)

- Including the COVID-19 Vaccine Safety Technical (VaST) Work Group (2020—2023)



Vaccines and Related Biological Products Committee (VRBPAC)



National Vaccine Advisory Committee



Advisory Commission on Childhood Vaccines



WHO's Global Advisory Committee on Vaccine Safety



National Immunization Technical Advisory Groups in other countries

Key Components of Communicating Vaccine Safety

- Data monitoring/evaluation and reporting
- Communication and collaboration with partners
- Public information dissemination
- Healthcare provider support
- Public awareness campaigns
- Crisis communication
- Public and healthcare provider responses
- Feedback and evaluation

Internal vaccine safety communications

- **Coordinate with other federal agencies**
- **Provide updates to other programs**
- **Update leadership**
 - DHQP, NCEZID, NCIRD, and CDC
- **Present findings to ACIP Work Groups**
- **Work with NCIRD colleagues for updating ICC and VIS**

Preparing for the National COVID-19 Vaccination Program

- **CDC started developing a COVID-19 vaccine safety communications plan in summer 2020**
- **Plan included:**
 - Goals and objectives
 - Situation analysis
 - Anticipated audiences
 - Pre-developed messages
 - Channels and tactics, including activities and products
 - Evaluation and metrics
 - Timeline