Children's MINNESOTA

COVID-19 VACCINE Q AND A
IL CHILDREN'S ADVOCACY CENTERS

February 17, 2021

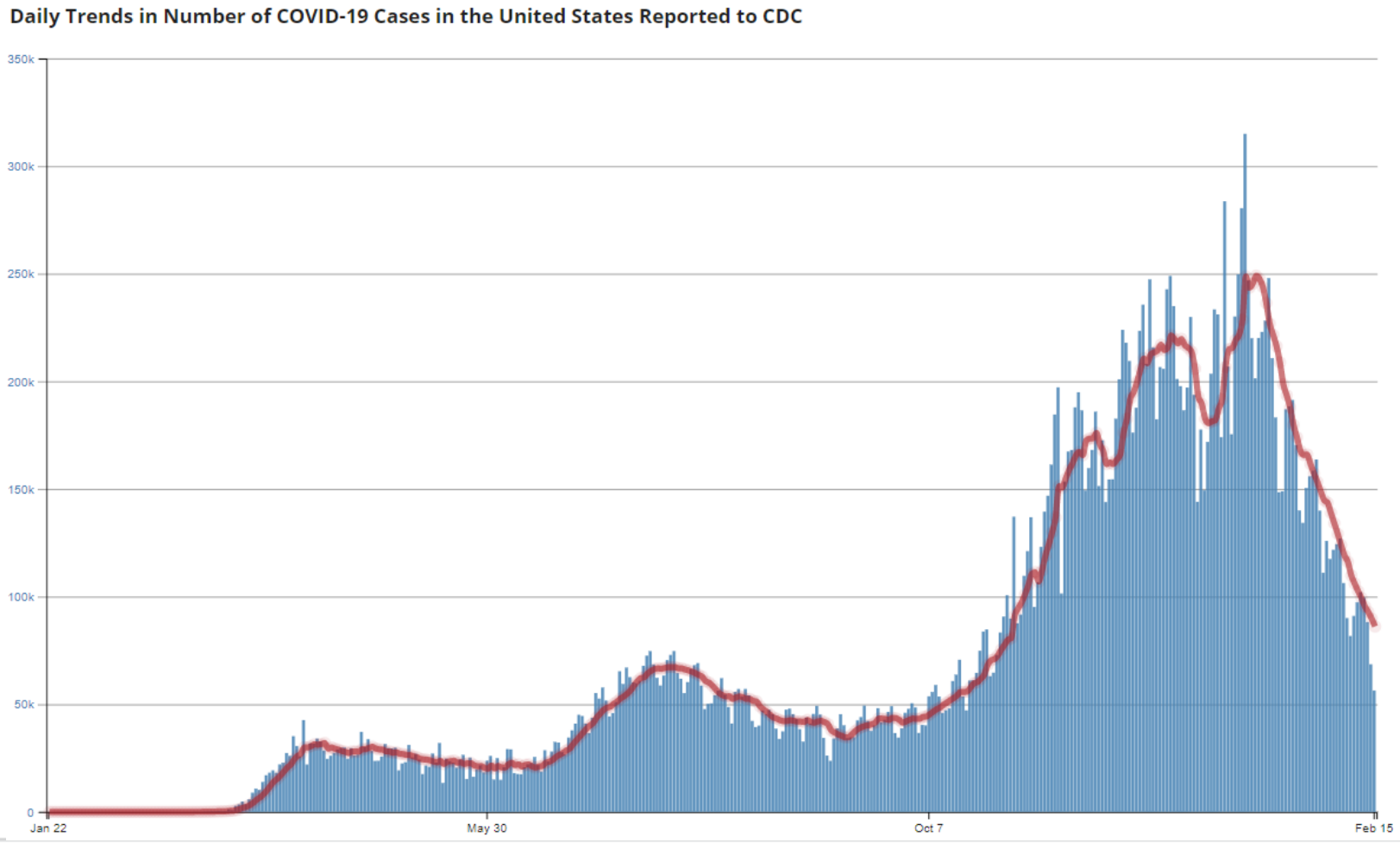
Joseph Kurland, MPH, CIC

Goals

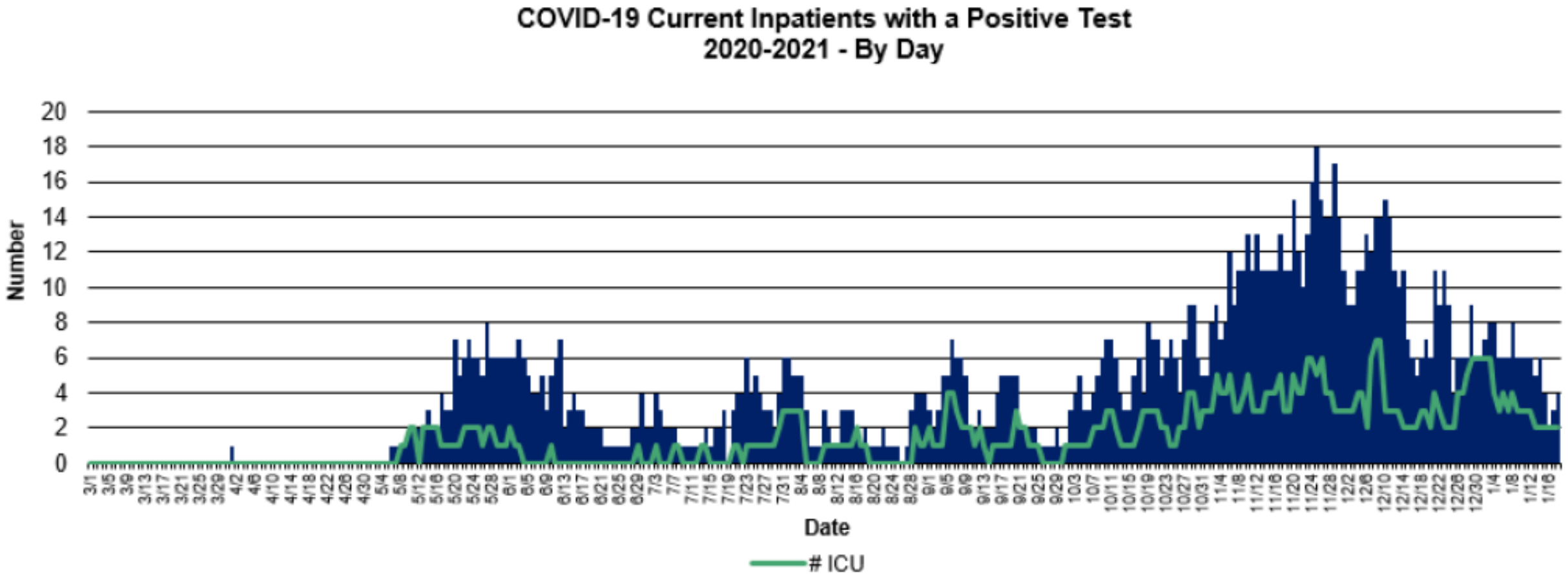
- ✓Update on the state of the pandemic
- ✓Understand the hazards of the disease—why we vaccinate
- ✓Understanding the risks and benefits of the vaccine
- ✓Clarify myths or misinformation
- ✓Answer your questions

EPIDEMIOLOGICAL TRENDS

US Cases per day down. 485,000+ deaths



Vaccines will be our path out of the pandemic-good for us, good for kids



IS COVID-19 REALLY THAT BAD?

COVID impacts nearly every organ

@NatureMedicine nature.com/articles/s4159 by @aakriti_15 @MVMadhavanMD et al

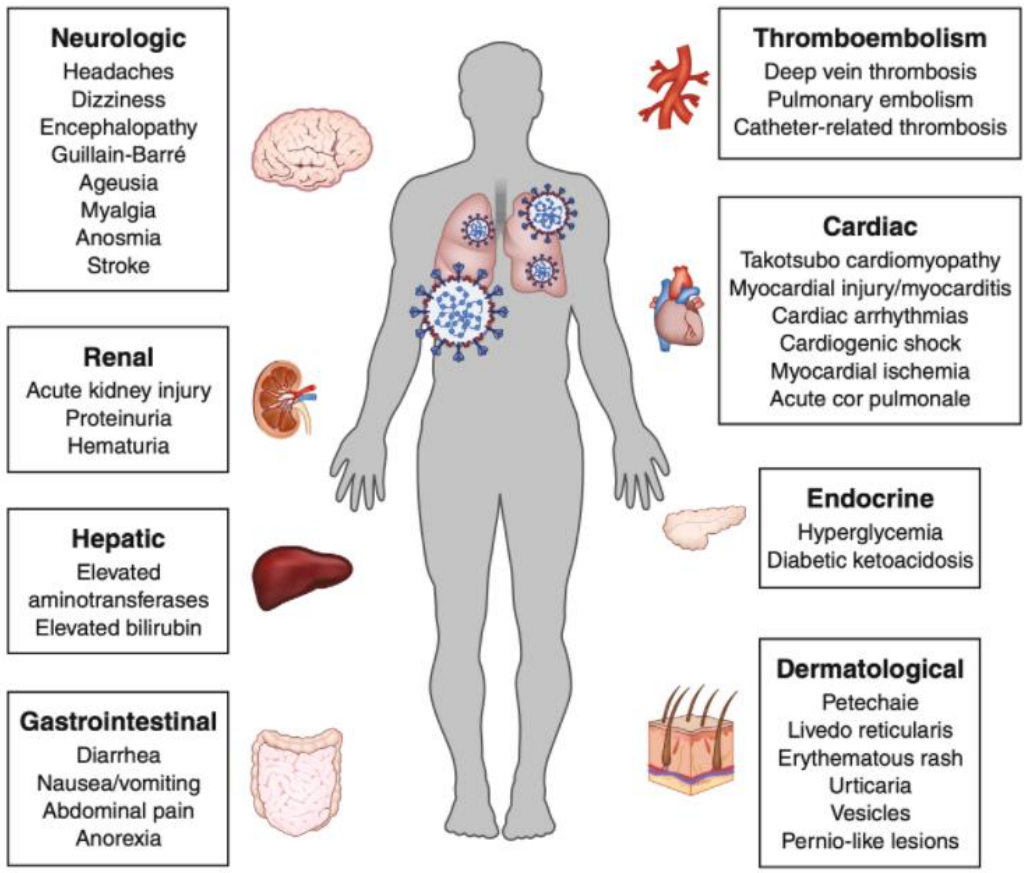
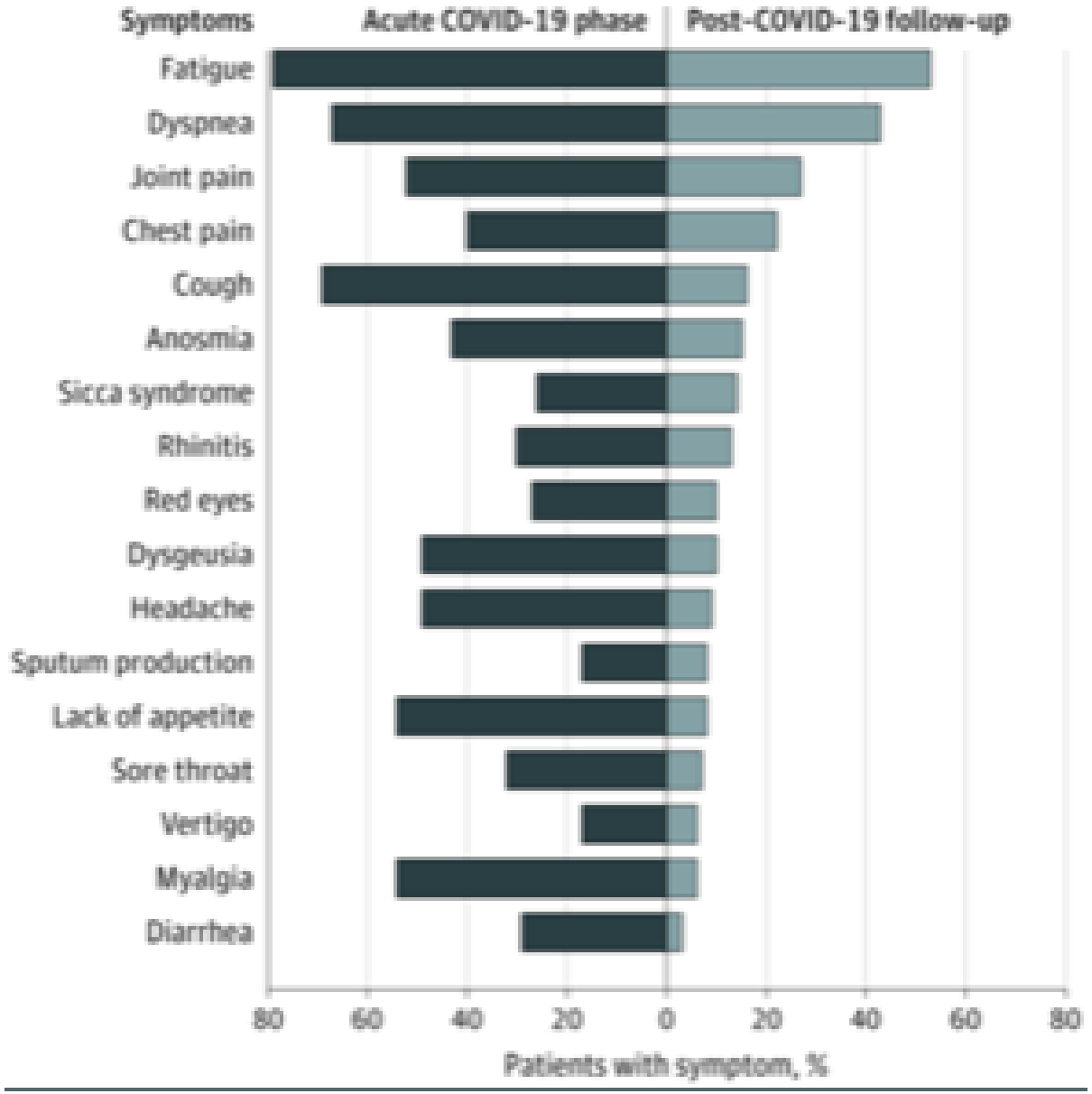


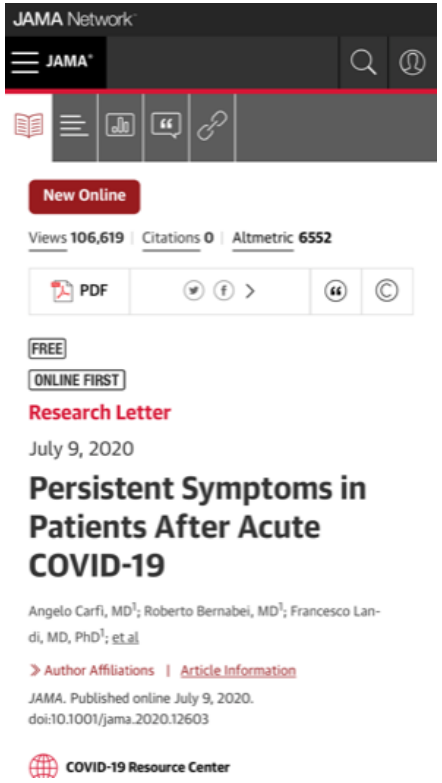
Fig. 2 | Extrapulmonary manifestations of COVID-19. The pulmonary manifestation of COVID-19 caused by infection with SARS-CoV-2, including pneumonia and ARDS, are well recognized. In addition, COVID-19 is associated with deleterious effects on many other organ systems. Common extrapulmonary manifestations of COVID-19 are summarized here.

Morbidity, not just mortality

"Long Haulers" 143 Italian hospitalized adult pts 60 days later



- 12.6% free of COVID symptoms
- 32% had 1 or 2 symptoms
- 55% had 3 or more symptoms
- 44% had worsened quality of life


JAMA Network

JAMA

New Online

Views 106,619 | Citations 0 | Altmetric 6552

PDF

FREE

ONLINE FIRST

Research Letter

July 9, 2020

Persistent Symptoms in Patients After Acute COVID-19

Angelo Carfì, MD[1]; Roberto Bernabei, MD[1]; Francesco Landi, MD, PhD[1]; et al

Author Affiliations | Article Information

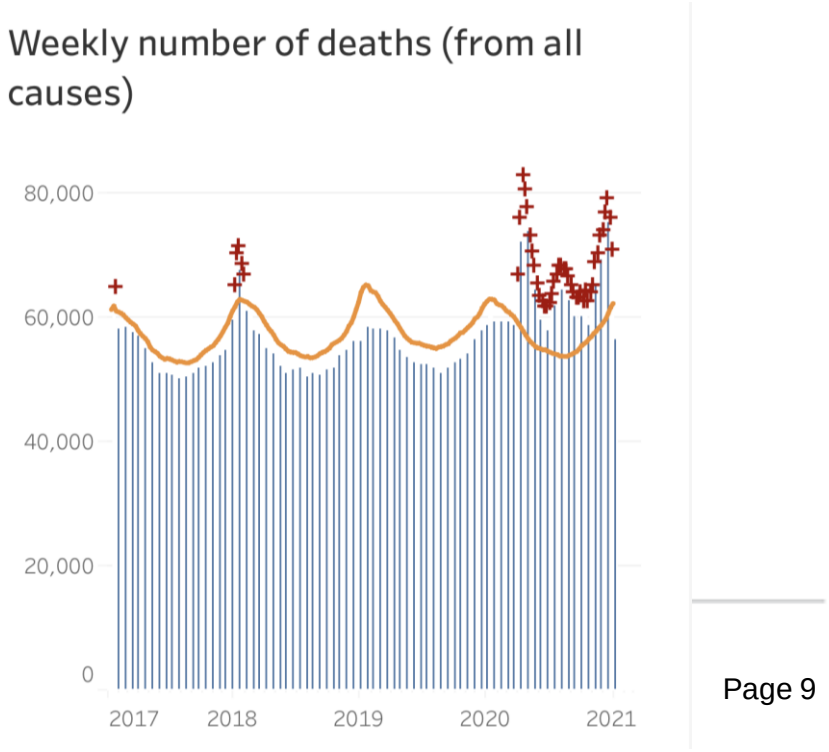
JAMA. Published online July 9, 2020. doi:10.1001/jama.2020.12603

COVID-19 Resource Center

Why should I get a vaccine?

- To protect yourself
- Leading cause of death in US
- The risk of the disease is far greater than the risk of the vaccine
- People of all ages can die from having COVID-19
- Many people have “long COVID” which is a chronic form we are still learning about

- To protect your community
- We need ~80% vaccinated for protection
- Vaccines are the primary path out of the pandemic



WHO GETS IMPACTED THE MOST?

Has the vaccine been studied in people like me? Enrollment transparency

Children's MINNESOTA

A vaccine for everyone…find yourself in the Cove study

Interim data snapshot - October 21, 2020 - subject to change

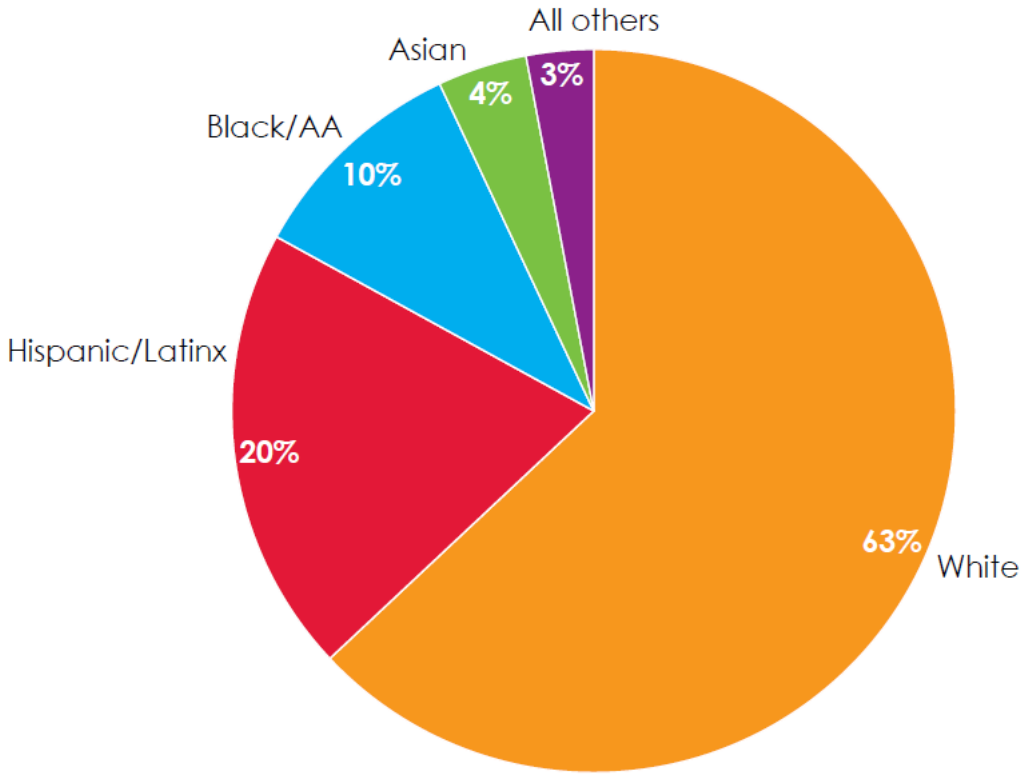
moderna

Slide

Phase III: Check efficacy in diverse subjects

Race and ethnicity

Interim data snapshot - October 21, 2020 - subject to change

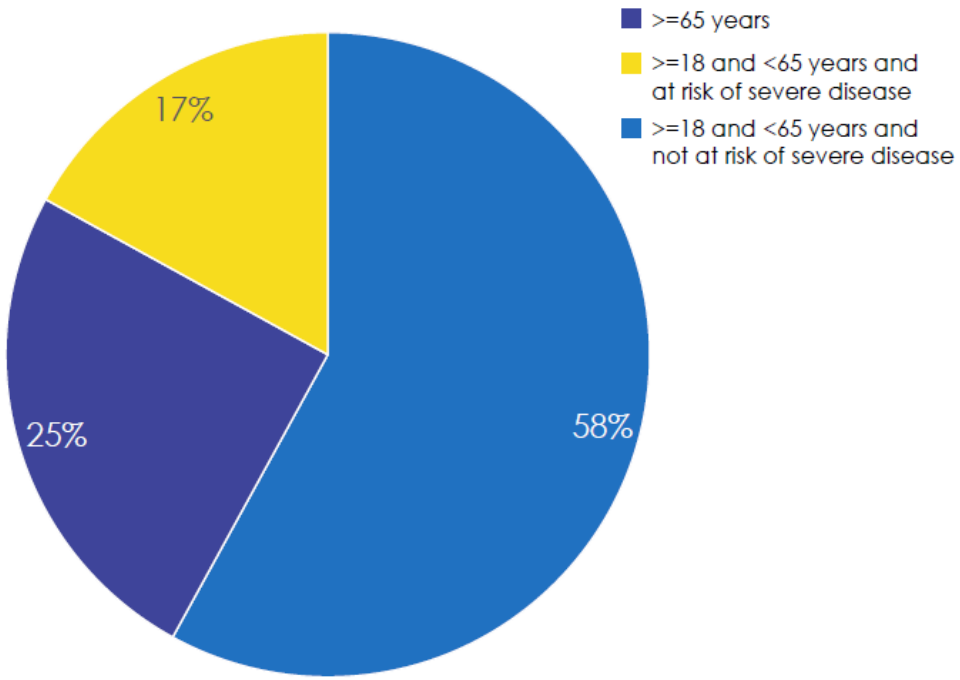


Representative Subjects important

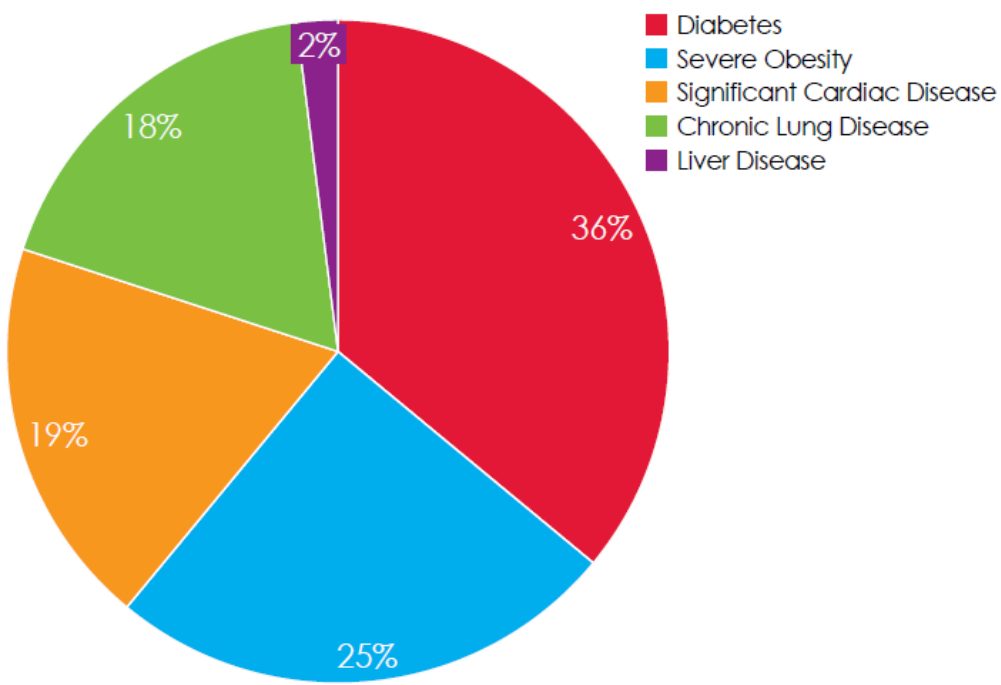
Risk factors for severe COVID-19 disease

Interim data snapshot - October 21, 2020 - subject to change

Risk stratification in Cove Study



Comorbidities of at risk participants in Cove Study



How can I learn more about why people of color should take the vaccine?

- Star Net Home
- Departments & Committees
- FOR EMPLOYEES
  - Children's Nurse Web
  - EMR Center
  - Star Net News
- Data Requests & Reports
- Clinical A-Z Library
- Lab Test Directory
- Professional Staff Portal
- REFERENCES
  - Administrative
  - Ambulatory Policies
  - Hospital Policies
  - Procedures (Lippincott)
  - Clinical
  - Clinical Guidelines
  - Reports
- Newsletters
- Children's Way
- Giving to Children's
  - Employee Giving

STAR NET NEWS

Joint ERG virtual meeting recap: "Why should I take the COVID-19 vaccine?"

Posted on January 18, 2021 by Admin

On Friday, Jan. 15, more than 120 Children's Minnesota employees logged into the first virtual joint employee resource group (ERG) meeting of 2021. During this meeting titled "Why should I take the COVID-19 vaccine?"

ERG members heard directly from Children's Minnesota leaders in each of the six employee resource groups. Panelists spoke on the history of medical mistrust in communities of color, shared personal stories as to why they will take the vaccine, and provided science-based information to help individuals make an informed decision on whether or not to take the COVID-19 vaccine.

This was not your typical COVID-19 vaccine webinar. It was a candid, grounded in

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Recent Posts

- Closing the loop on SLRs: December 2020
- Attend upcoming COVID-19 Town Hall, Jan. 22
- Dr. Aimee Sznewajs adds Medical Director of Acute Care Services to responsibilities
- COVID-19 updates Jan. 14, 2021
- Joint ERG virtual meeting recap: "Why should I take the COVID-19 vaccine?"

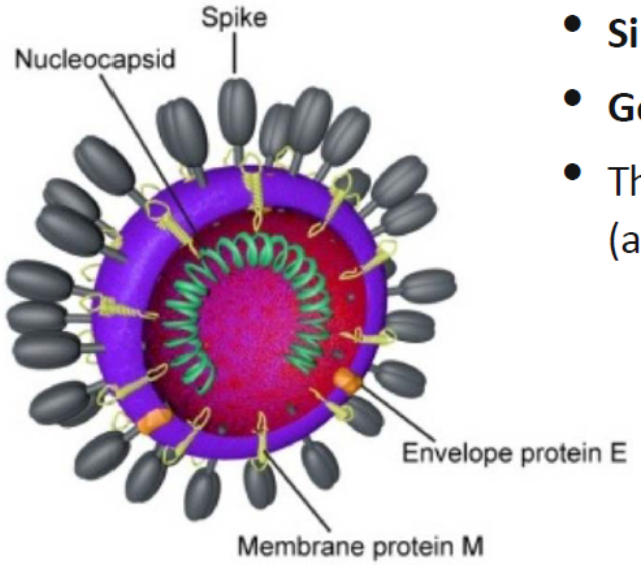
Recent Comments

- Amy Cahill on Deb Lindberg recognized for her remarkable care with 2020 EPFCC Award
- JenniferJo Johnson on Deb Lindberg recognized for her remarkable care with 2020 EPFCC Award
- Mary Sullivan on COVID-19 vaccination rollout begins for staff
- Matthew Winkel on Deb Lindberg recognized for her

SO HOW DOES THE VACCINE WORK?

Understanding the virus for vaccine development

Basic Structure of *Coronavirinae*

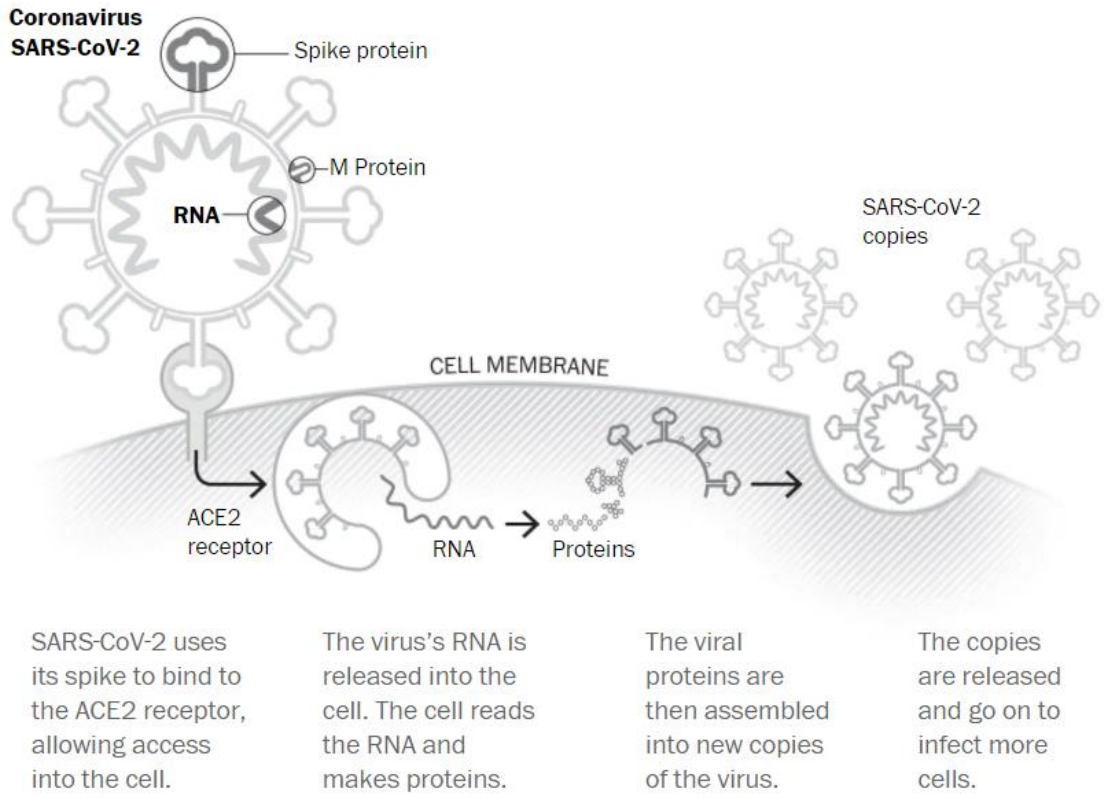


- **Single-stranded RNA viruses**
- **Genomes range from 25 to 32 kilobases**
- The coronaviral genome encodes **four major structural proteins** (all are required to produce a structurally complete viral particle)
  - Spike (S) protein: *binding*
  - Nucleocapsid (N) protein: *RNA synthesis*
  - Membrane (M) protein: *organization/assembly*
  - Envelope (E) protein: *organization/assembly*

Targeting the Spike Protein

Accessed 11/1/2020

The Washington Post
Democracy Dies in Darkness

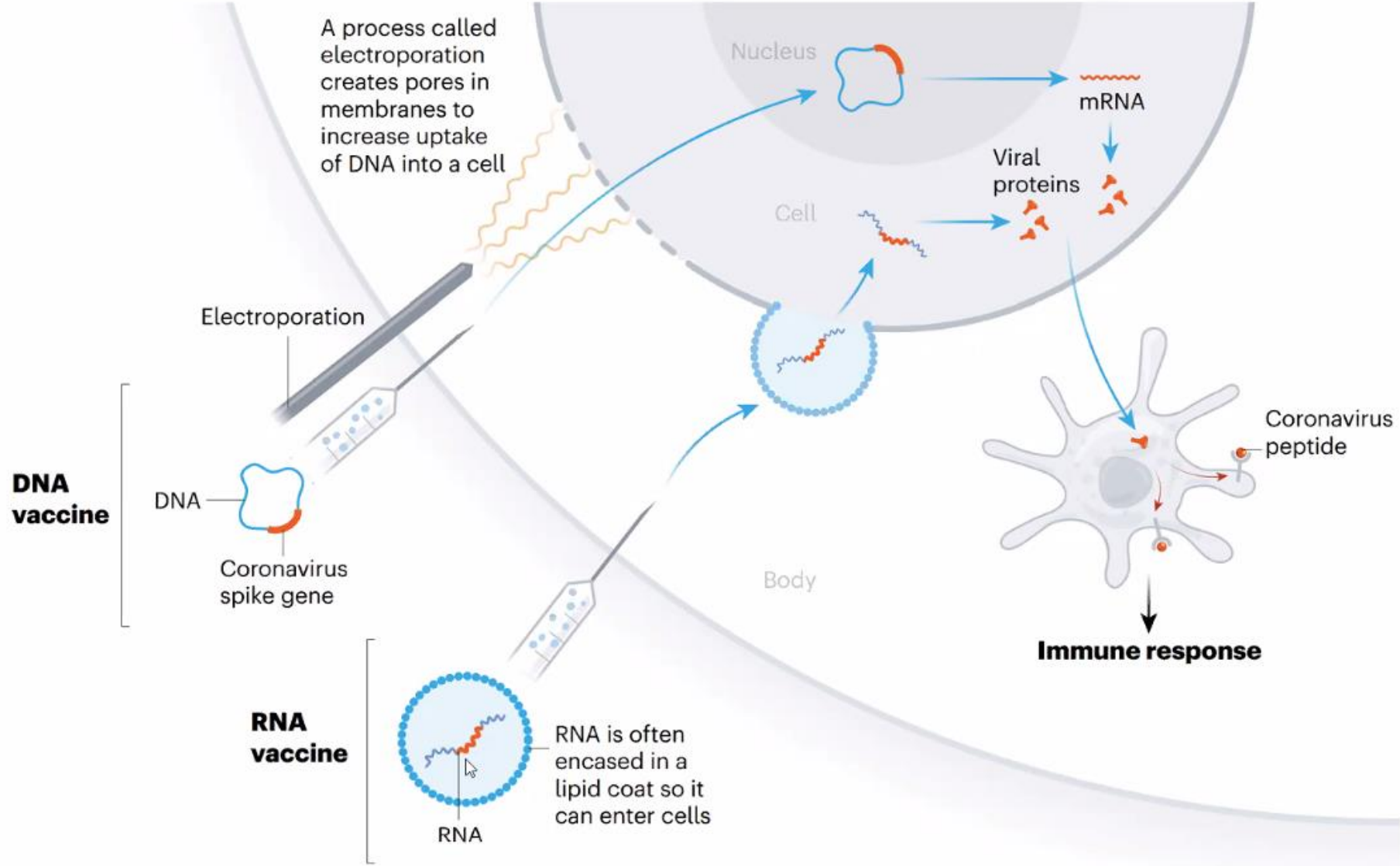


Here is a look at how different vaccine technologies being developed around the world would ideally elicit an immune response to prevent SARS-CoV-2 in humans. Each vaccine may vary somewhat in how it works, but each would generally follow these steps.

NUCLEIC-ACID VACCINES

At least 20 teams are aiming to use genetic instructions (in the form of DNA or RNA) for a coronavirus protein that prompts an immune response. The nucleic acid is inserted into human cells, which then churn out copies of the virus protein; most of these vaccines encode the virus's spike protein.

RNA- and DNA-based vaccines are safe and easy to develop: to produce them involves making genetic material only, not the virus. But they are unproven: no licensed vaccines use this technology.



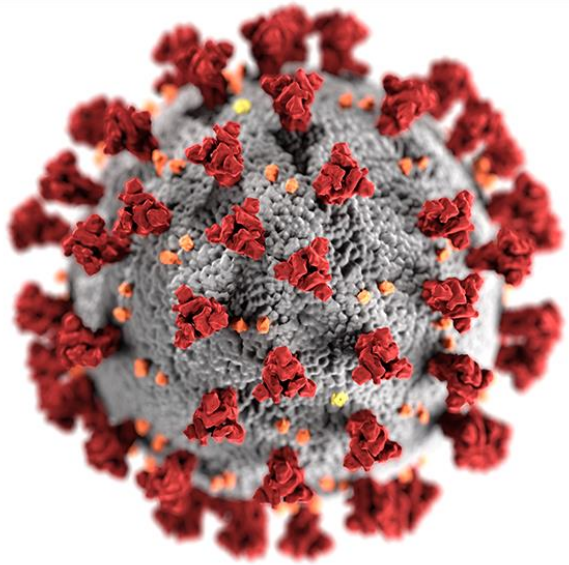
Nature. vol 580, 30 April 2020

Does the mRNA get into our genes?

- Does not enter the nucleus.
- No changes to DNA are possible
- Messenger RNA is like Snapchat
- It delivers a piece of genetic material; its messenger RNA is temporary
- Tells our cells to make one spike protein (not the other 24), not the whole virus
- Then the proteins stimulate our bodies to make antibodies against the spike protein
- Induces immune response without the natural infection
- Antibodies to the spike protein prevent virus from attaching to cells and prevent from infecting cell and making us sick.

NO!

@profshanecrotty LaJolla Institute for Immunology



- @DrPaulOffit CNBC How COVID-19 vaccines work 11.11.20

Children's MINNESOTA

WE USE THE PFIZER-BIONTECH VACCINE
CAN YOU TELL US MORE ABOUT IT?

Pfizer Vaccine Details

- 5 doses per 2 mL vial (contains no preservatives)
- 2 (0.3mL) doses for series
  - 21 days between doses
- Given Intramuscular (IM) injection
- Most common responses:
  - Arm soreness
  - Fatigue and headache
  - Fever

What should we expect after getting the vaccine?

Pfizer Press Release 11.18.20

- Very large trial 19,000
- 100% some local response (pain, redness, swelling)
- Fatigue 3.8%
- Headache 2%
- Fever 2%

Earn our immunity, like strong muscles
@profshanecrotty LaJolla Institute for Immunology

Moderna Press Release 11.30.20

- Huge trial
- 100% some local response (pain, redness, swelling)
- und that severe side effects included:
- fatigue in 9.7% of participants
- muscle pain in 8.9%
- joint pain in 5.2%
- headache in 4.5%

- Immune Responses. Prepare for it.

What side effects is Children's seeing?

Day of vaccination

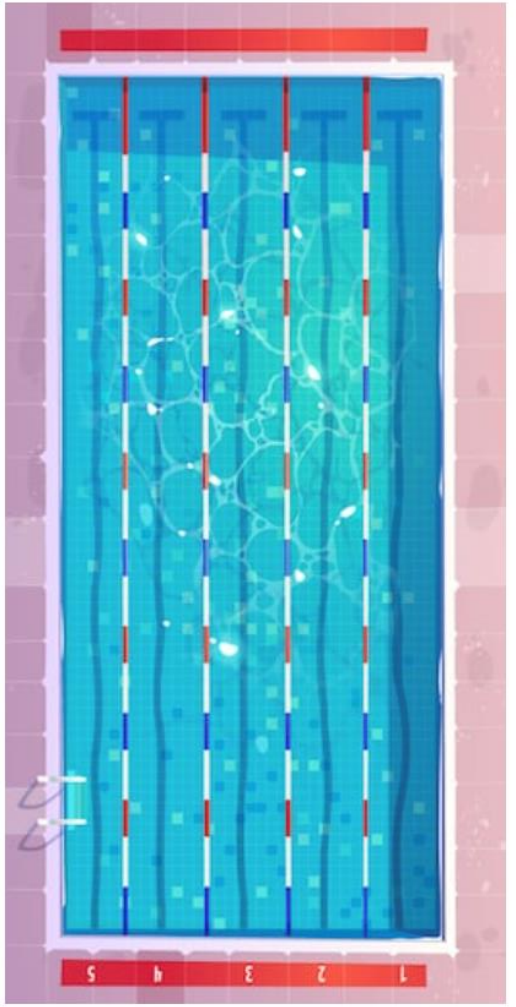
- No severe anaphylaxis
- Vast majority have nothing
- Few are needle phobic/anxious
- Few cases of flushing, dizzy
- Rash
- One sought help for high BP which was an existing problem

Day after vaccination

- Most have nothing
- Arm soreness
- Fatigue
- Body aches
- Headache
- Lymph node enlargement
- All brief, managed at home

COVID VACCINE FAQ'S

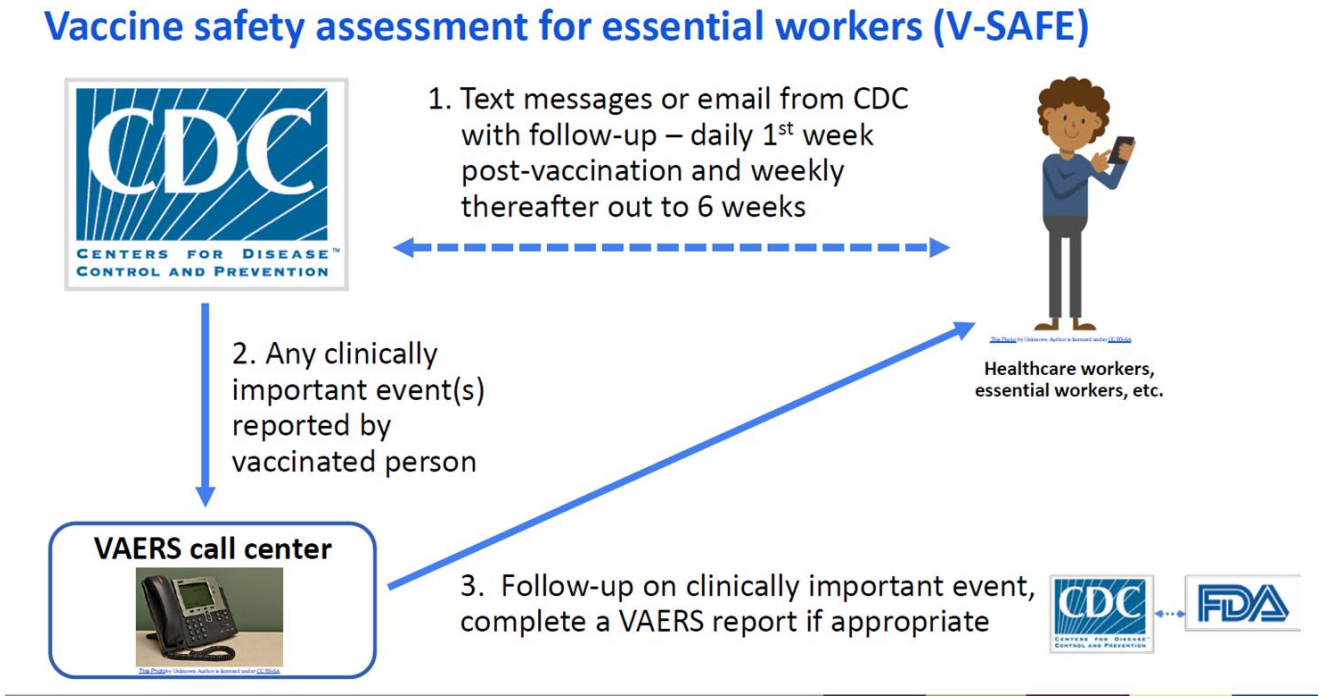
This was created so fast? Is it safe?



Vaccine Safety

- **V-SAFE program** Vaccine Safety Assessment for Essential Workers
- Smart Phone app active surveillance daily sx check in
- Numerator for incidences of site pain, adverse events
- VAERS will be active, electronic surveillance as usual

- Hospitals will track weekly doses to NHSN for denominator



Safety is not the absence of risk it is the balance of risk.
Dr. Grace Lee

- ✓ Safety and efficacy are primary goals with full commitment for no short cuts
- ✓ Expect safety signals like the transverse myelitis—explore, background incidence, etc

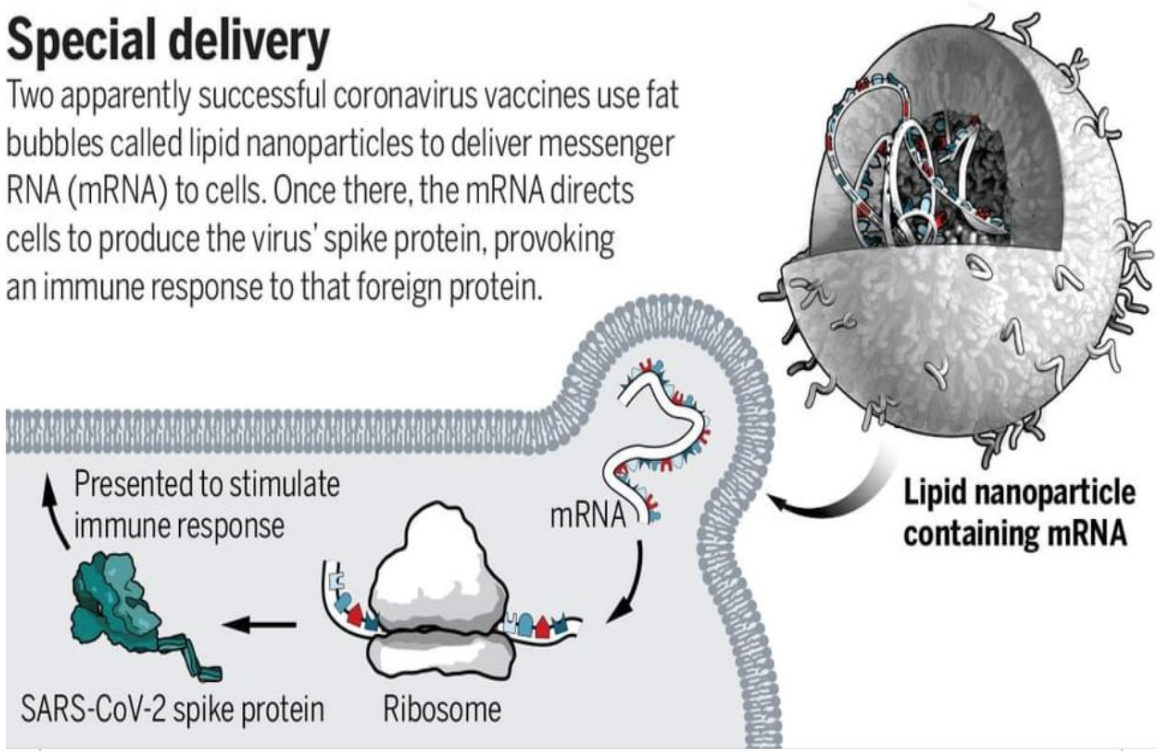
What are these virus variants? Will the vaccine cover them?

- Viruses mutate and change
- Sometimes a little, sometimes a lot
- The new variants are more easily spread
- They are equally as harmful but not more lethal
- It is possible we may see these more in kids
- Vaccines we have today seem to cover the variant viruses
- We continue to monitor this
- Will we need an annual shot like flu?

Can you get COVID from the COVID vaccine?

- No! Not possible given the technology.
- Live vaccines (measles, chickenpox) can mimic disease but are not being used because they take a long time to produce

Why different freezing temperatures for mRNA vaccines?



Wadman M. Science. 11.27.2020;370(6520):1022.
https://science.sciencemag.org/content/370/6520/1022

Pexels.com free images accessed 12.1.2020

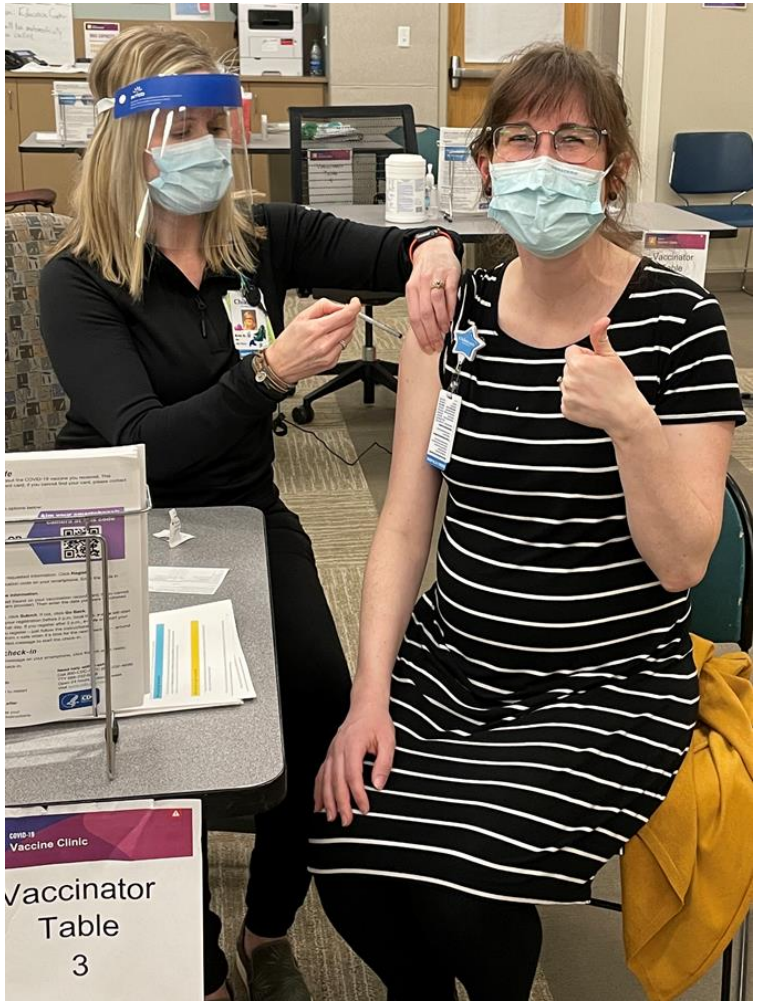
What about kids?

Current enrollment status

- BNT/Pfizer Phase III expanded to 16 & 17 year olds in September
- Moderna teen study is underway for 12-16. Thanks MN kids!
- Timeframe is summer at earliest to have enough data to know what the right dose is, how kids make antibodies, etc.

What about pregnant and breastfeeding women?

- Formal studies have not been done yet
- 23 women in studies were pregnant and are being followed
- Expert consensus is the vaccine doesn't have a biologically feasible way to harm baby or Mom
- Risk to pregnant women compared to others their age is 5 times greater of bad outcomes
- If in high risk group (HCP) American College of Obstetricians and Gynecologists recommend considering getting vaccinated
- No reason to believe the vaccine affects safety of breastmilk



https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/12/vaccinating-pregnant-and-lactating-patients-against-covid-19
DeBolt CA, et al. Pregnant women with severe or critical COVID-19 have increased composite morbidity compared to non-pregnant matched controls. Am J Obstet 2020 Nov doi: 10.1016/j.ajog.2020.11.022

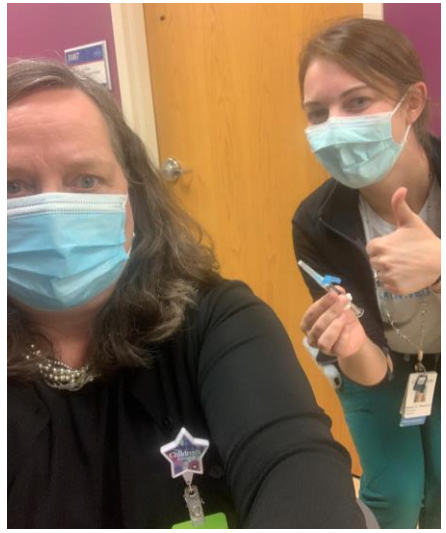
Does the vaccine cause infertility?

- No
- The vaccine targets the immune system, not the reproductive system
- There were 13 people in the clinical trials who got vaccine and got pregnant
  - All are still pregnant and doing well
- Myth around a protein called syncytin-1
  - Came from a message board versus any legitimate publication
  - If this rationale were true, it would also apply to women who have actual COVID-19

Who will be giving the vaccine; is it free?

No charge for the vaccine

- General public also no charge
- If have insurance, the administration fee will be covered
- If no insurance, no charges.



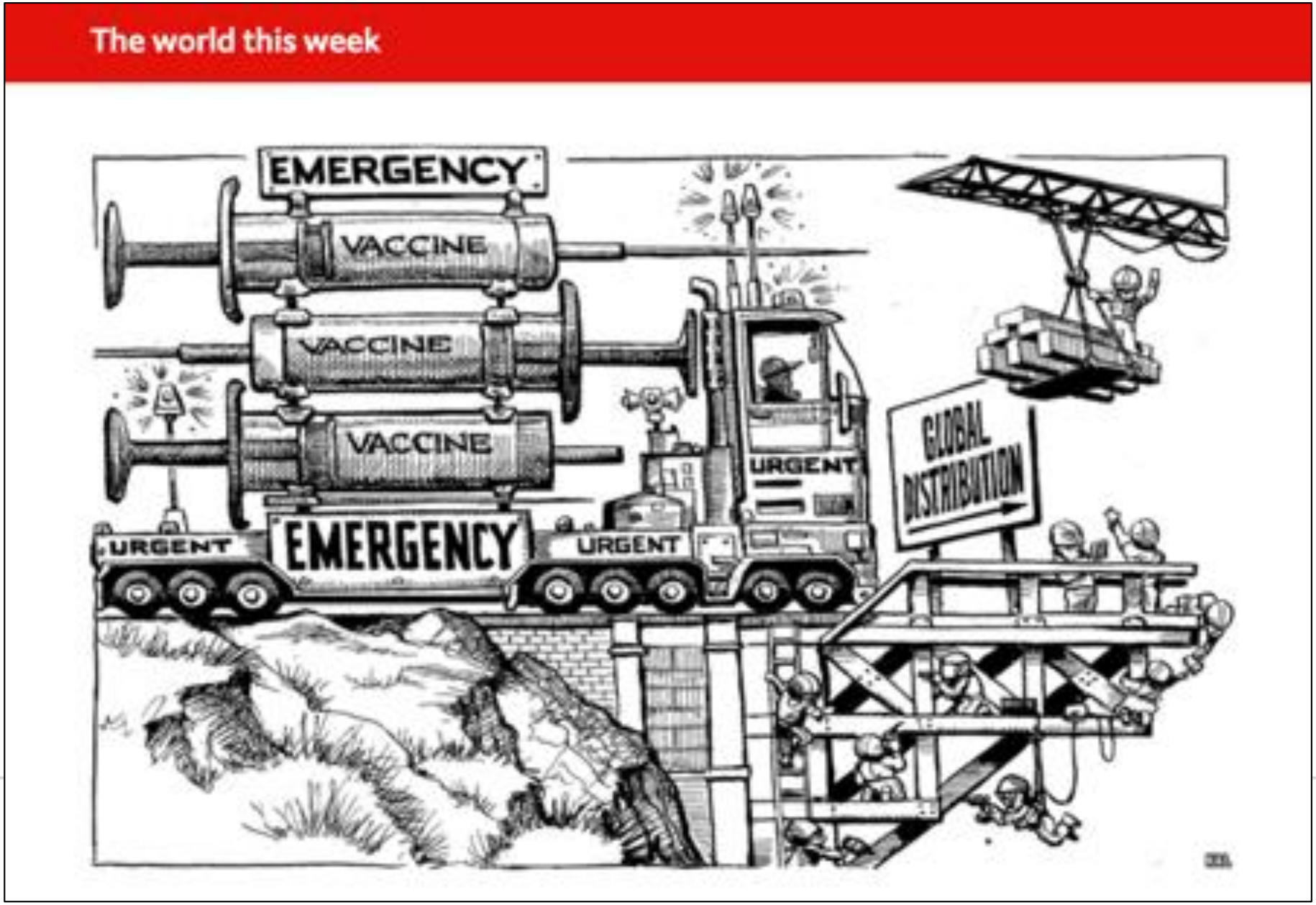
If side effects occur, how will absence be handled?

CDC

- Discussion about not penalizing staff who opt in to be vaccinated and then need PTO day due to side effects that preclude someone from working.
- May be some labor guidance

Building the Vaccine Distribution Bridge

The Economist Cartoon Accessed 11.29.2020



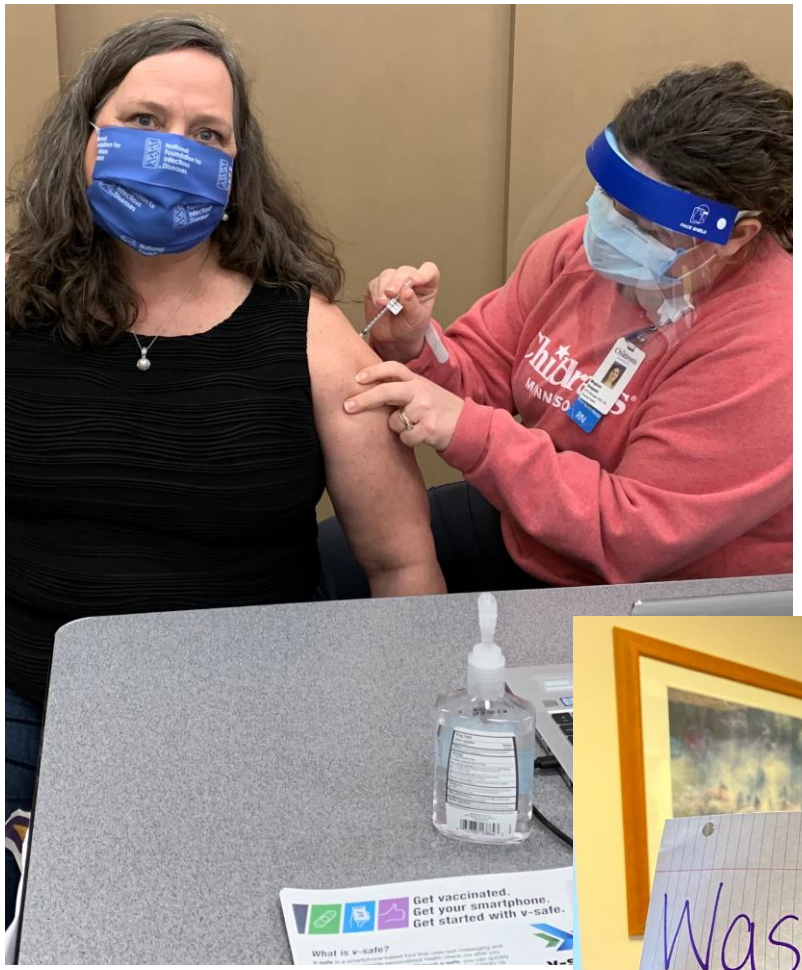
Resources

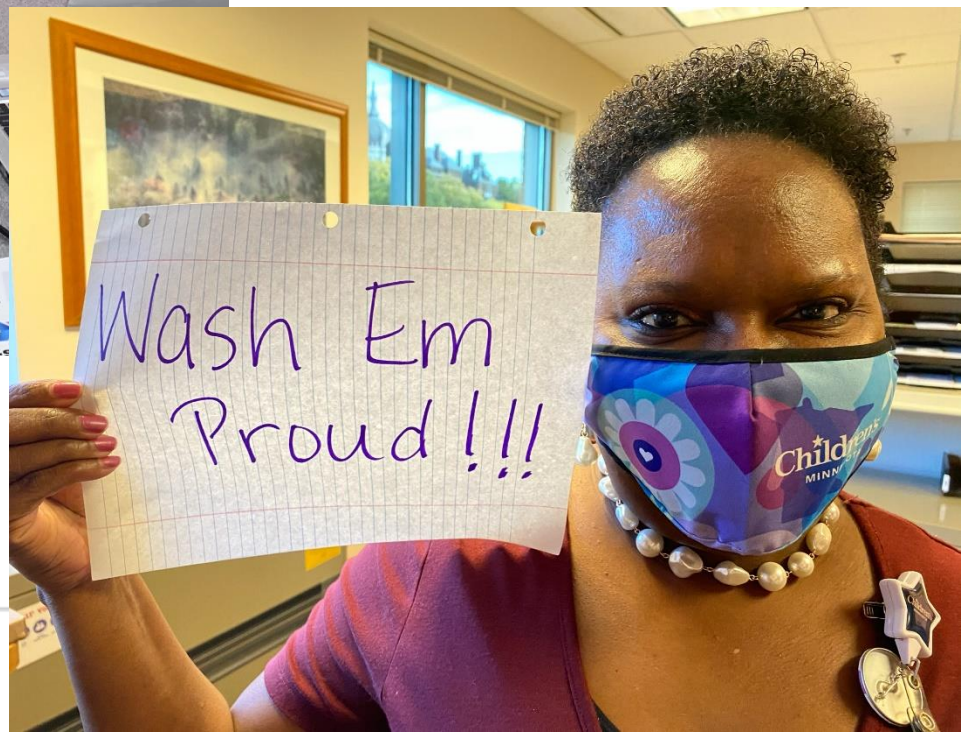
- ✓ CHOP.edu/vaccine/COVID Q&A
- ✓ Clinicaltrials.gov for vaccine research update
- ✓ cdc.gov/acip for latest slides, audio, upcoming agendas
- ✓ Coronaviruspreventionnetwork.org for trials enrollment
- ✓ Stat News special report *The story of MRNA: How a once-dismissed idea became a leading technology in the COVID vaccine race by Damian Garde 11.10.20 Katalin Kariko, senior VP at BioNTech*

https://www.childrensmn.org/for-health-professionals/talking-pediatrics-podcast/

- *Clinical practice guidelines*
- *COVID-19 updates*
- *Health equity*
- *AND MORE*

Questions?





THANK YOU