

# Session Six: COVID Fatigue and Vaccine Information & Updates

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Thursday, January 21, 2021  
330-430 PM CST  
Via Zoom



- ✓ Don't forget to mute your phone!
- ✓ Please enter your name & email address in the chat box
- ✓ Questions are welcome during the discussion (put in the chat box)
- ✓ Sessions will be recorded with video, PowerPoint, and Q&A available at: [www.childrensomaha.org/back-to-school/](http://www.childrensomaha.org/back-to-school/)
- ✓ An evaluation will be provided via a link at the end of the presentation and via email

# Wellbeing for Educators

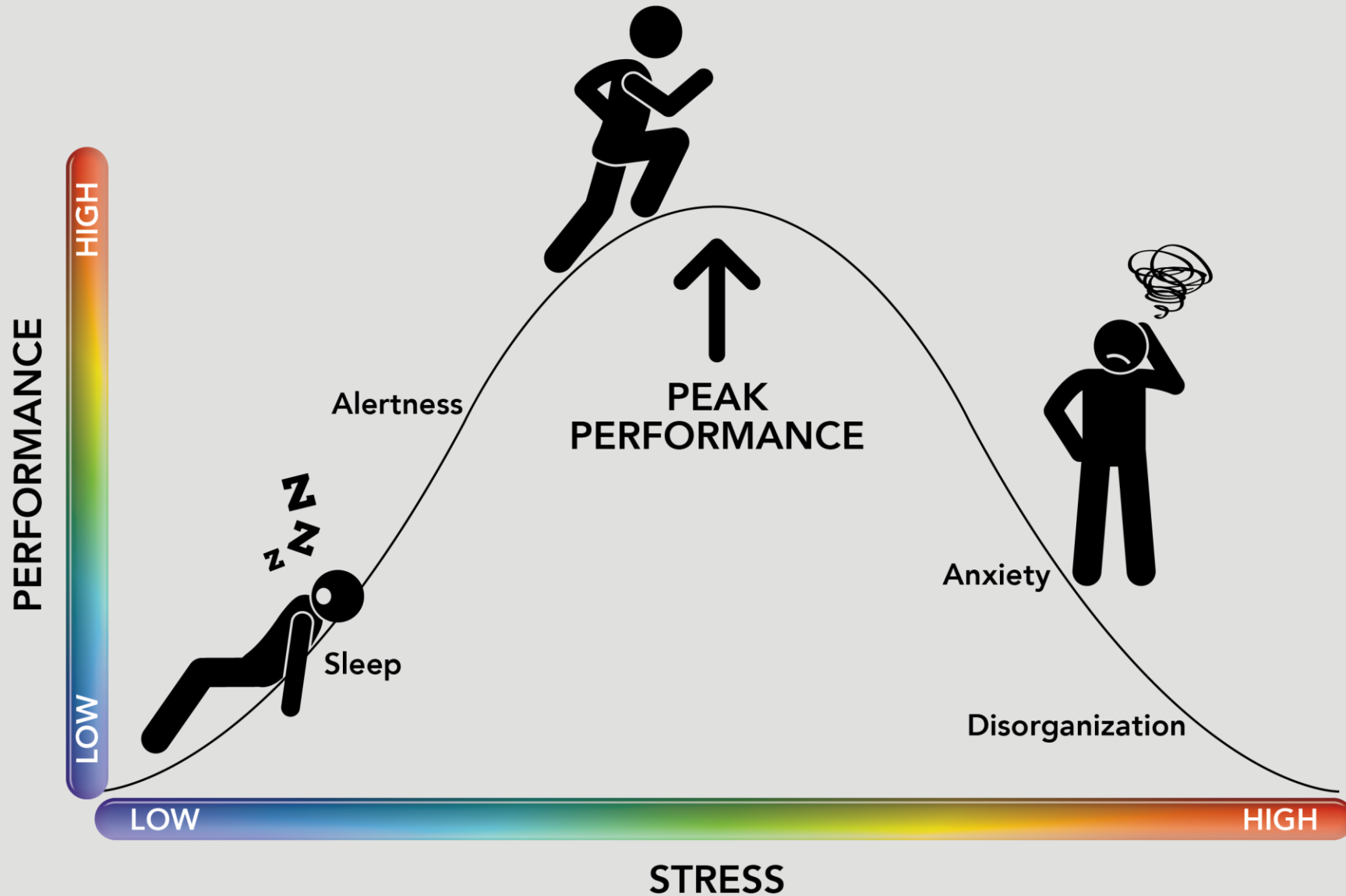
Linda Kenedy, EHA Wellness Program

January 21, 2021





# Stress + Performance

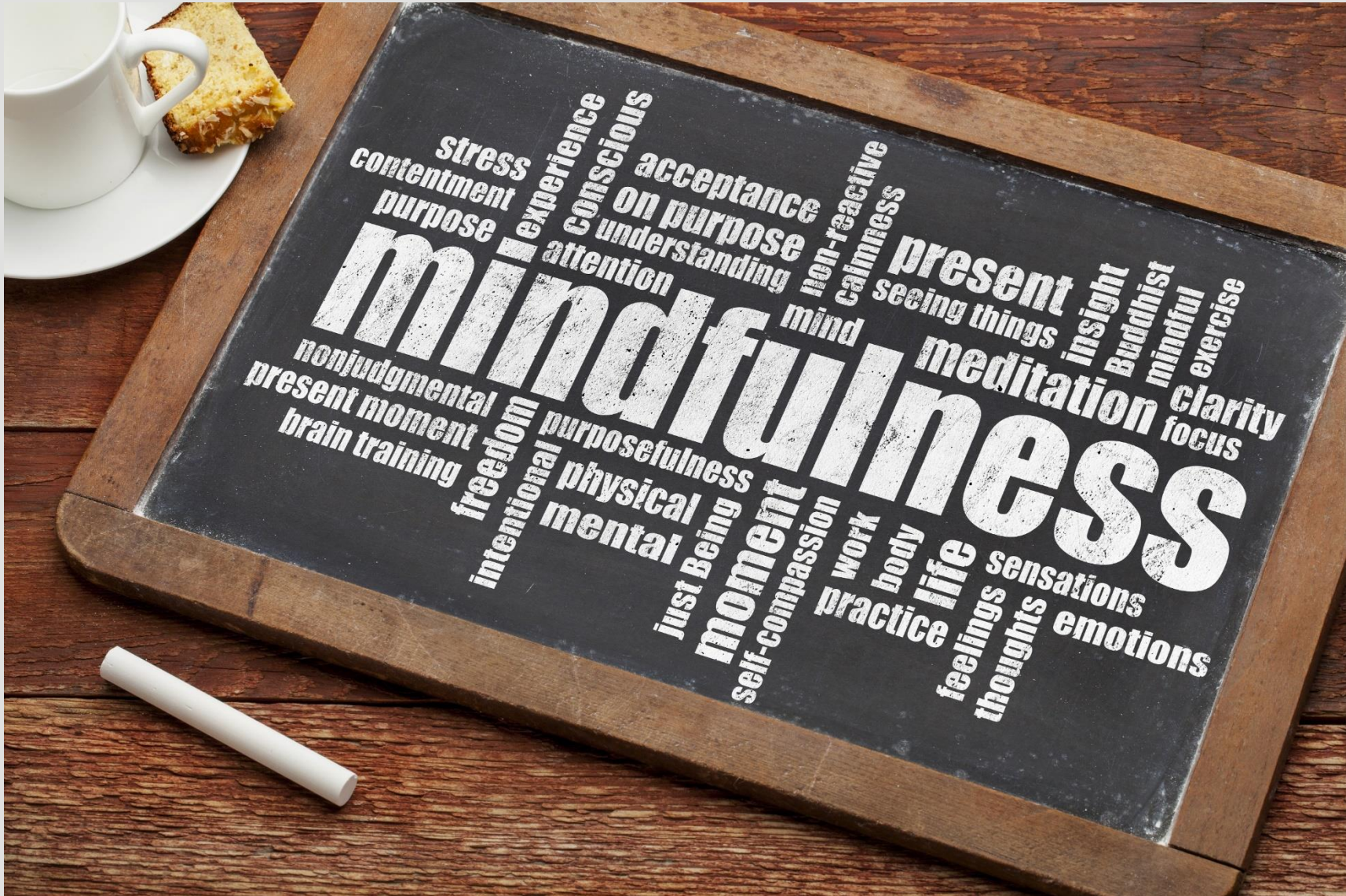


# What's in your toolbox?



# Questions....

1. What are you doing right now?
  2. What are you thinking right now?
  3. How are you feeling right now?
- Were your answers for #1 and #2 the same?
  - #3: Research shows we are happiest when what we are doing is what we are thinking about!







**MINDFUL, OR MIND FULL?**



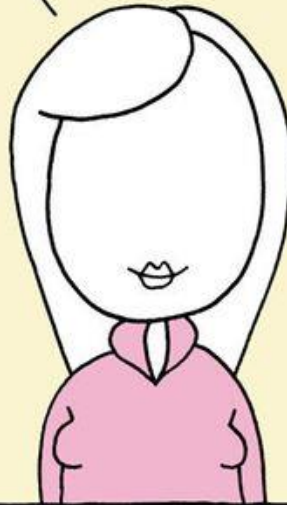
# What is Mindfulness?

- **Paying attention in a particular way:**
  - **on purpose,**
  - **in the present moment, and**
  - **nonjudgmentally.**
- **Maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment with compassion.**

# GRATITUDE LIST

GOOD MOOD

- DELICIOUS FOOD
- GOOD HEALTH
- WARM SHELTER



BAD MOOD

- NOT STARVING
- NOT SICK
- NOT HOMELESS



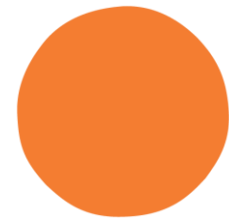
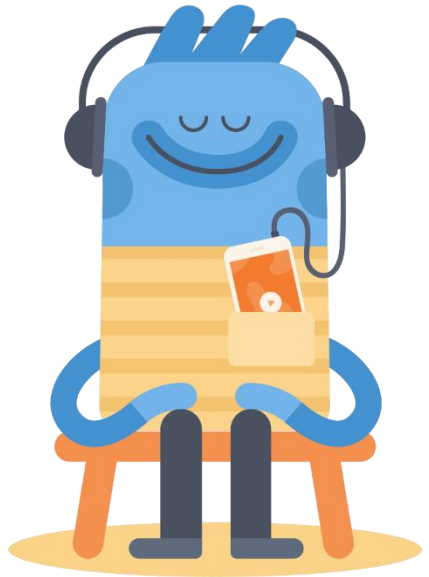
EVERYDAY PEOPLE CARTOONS BY CATHY THORNE





Make  
peace of  
mind  
your  
priority

# Headspace & EHA Wellness



headspace



[work.headspace.com/eha/member-enroll](https://work.headspace.com/eha/member-enroll)

Or go to [www.ehawellness.org](http://www.ehawellness.org) and enter your code and PIN.

Click on the Headspace logo.



# EHA Population Health

## Personalized Health Care Support for EHA Plan Members (BCBS)

- Connects you to a nurse health coach through a mobile health app called Wellframe.
- Download the Wellframe app to get started!



Lower health risks related to diabetes, high blood pressure and other conditions



Navigate the health care system so you get the most from your health insurance plan



Meet your health and wellness goals to live a healthier and happier life

# Coronavirus Update: Infections and Vaccines 1/21/2021

Alice Sato, MD PhD

Hospital Epidemiologist, CHMC

Assistant Professor, Pediatric Infectious Diseases, UNMC

@asato4kids



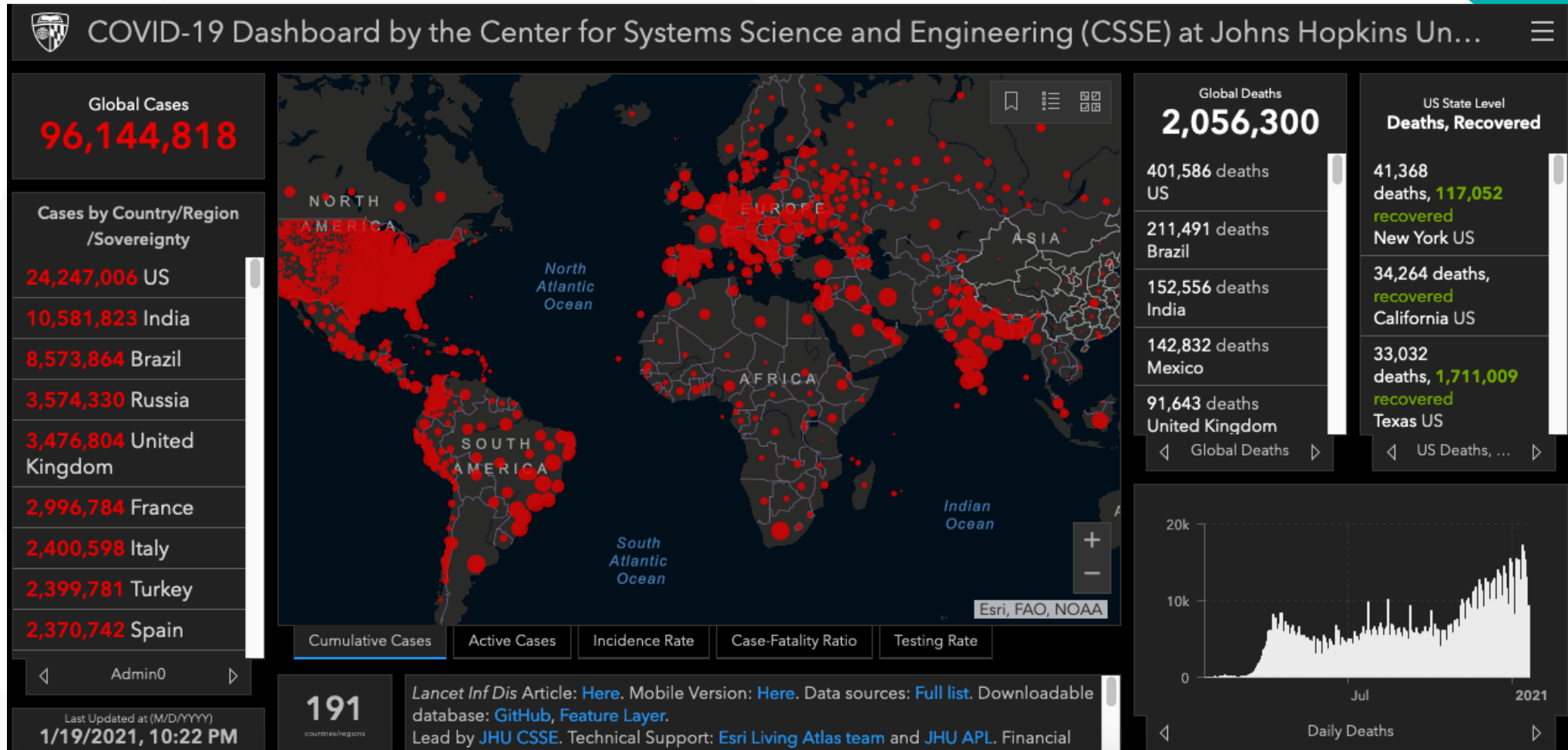
# Disclosures

- No relevant disclosures.
- Will discuss EUA use of vaccines.

"SITREP"  
January 2021



1/19:  
 US 24,247,006 cases  
 401,586 deaths (1.66% CFR)





## NATIONWIDE COVID-19 METRICS. 7-DAY AVERAGE LINES

Apr 1 - Jan 19

### Daily Tests

Jan 19: **1,698,121**

7-Day Avg: 1,965,647

### Daily Cases

Jan 19: **144,047**

7-Day Avg: 197,578

### Currently Hospitalized

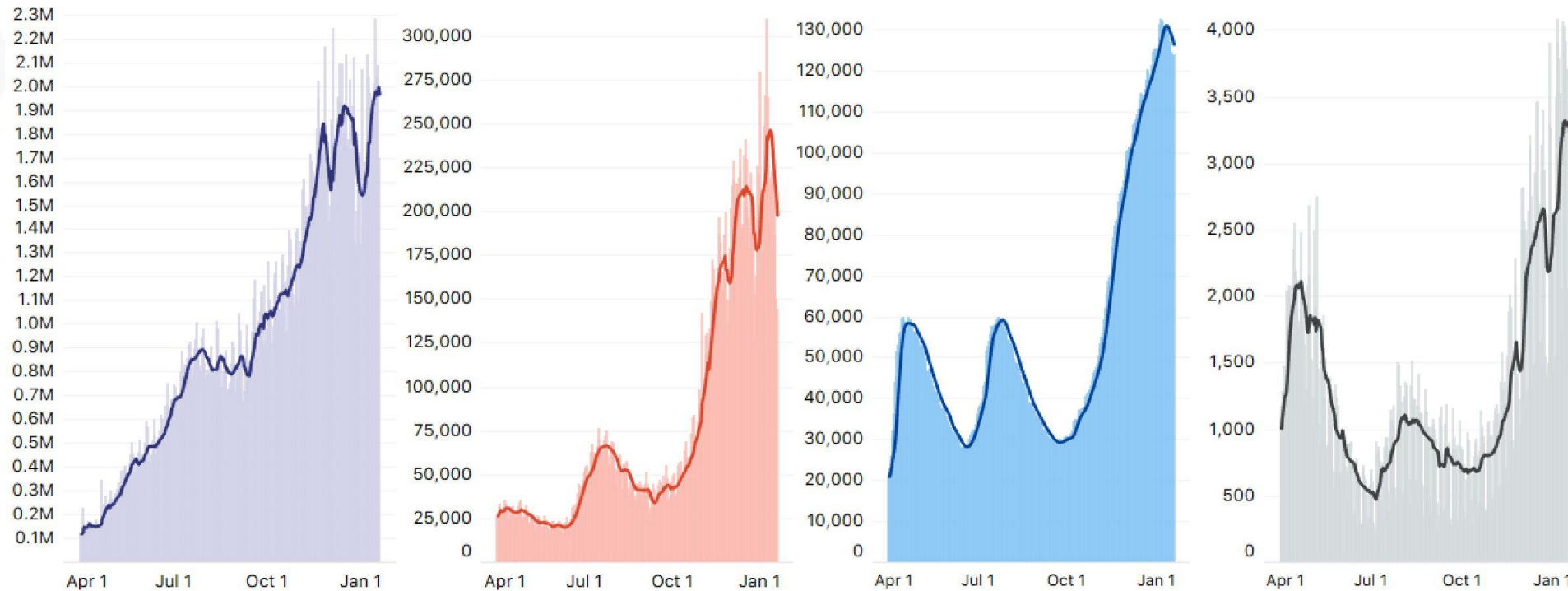
Jan 19: **123,820**

7-Day Avg: 126,395

### Daily Deaths

Jan 19: **2,141**

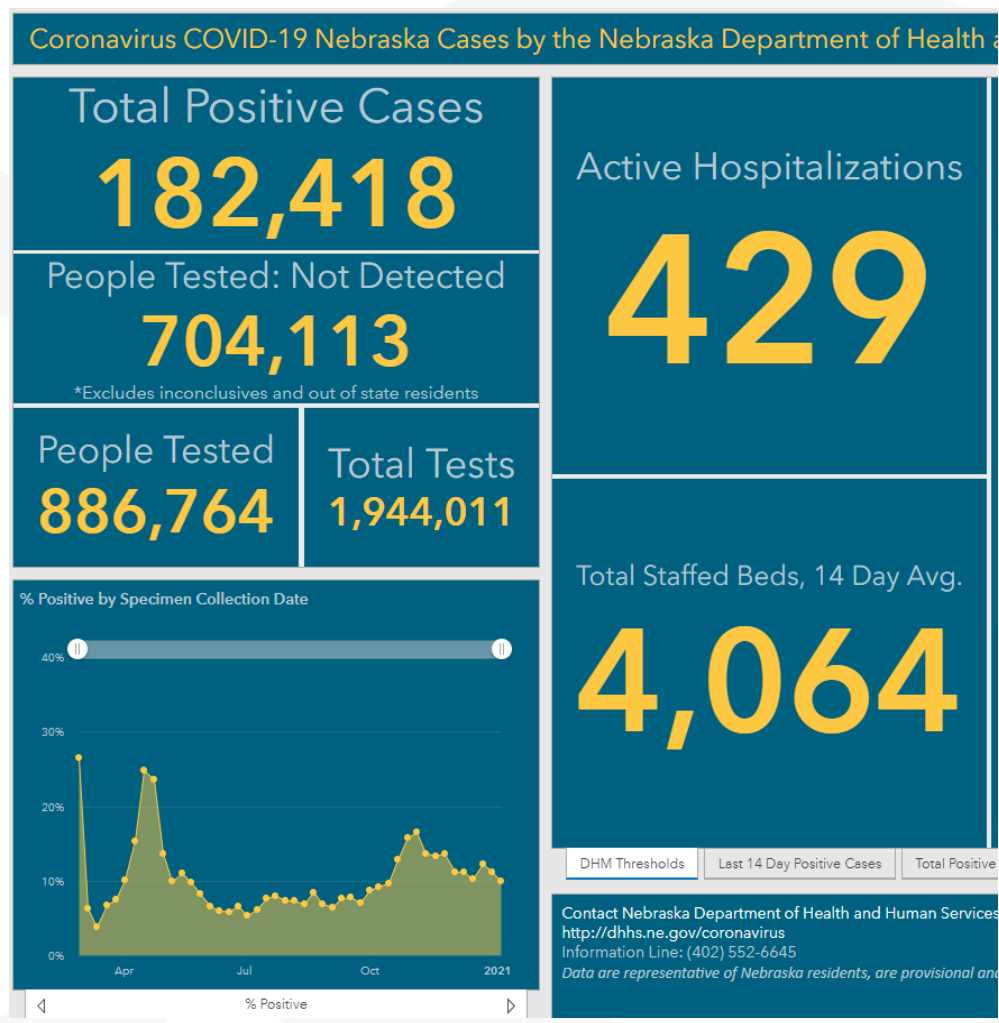
7-Day Avg: 2,988



Source: The COVID Tracking Project

● Single-day record

# 1/18/21 State of Nebraska



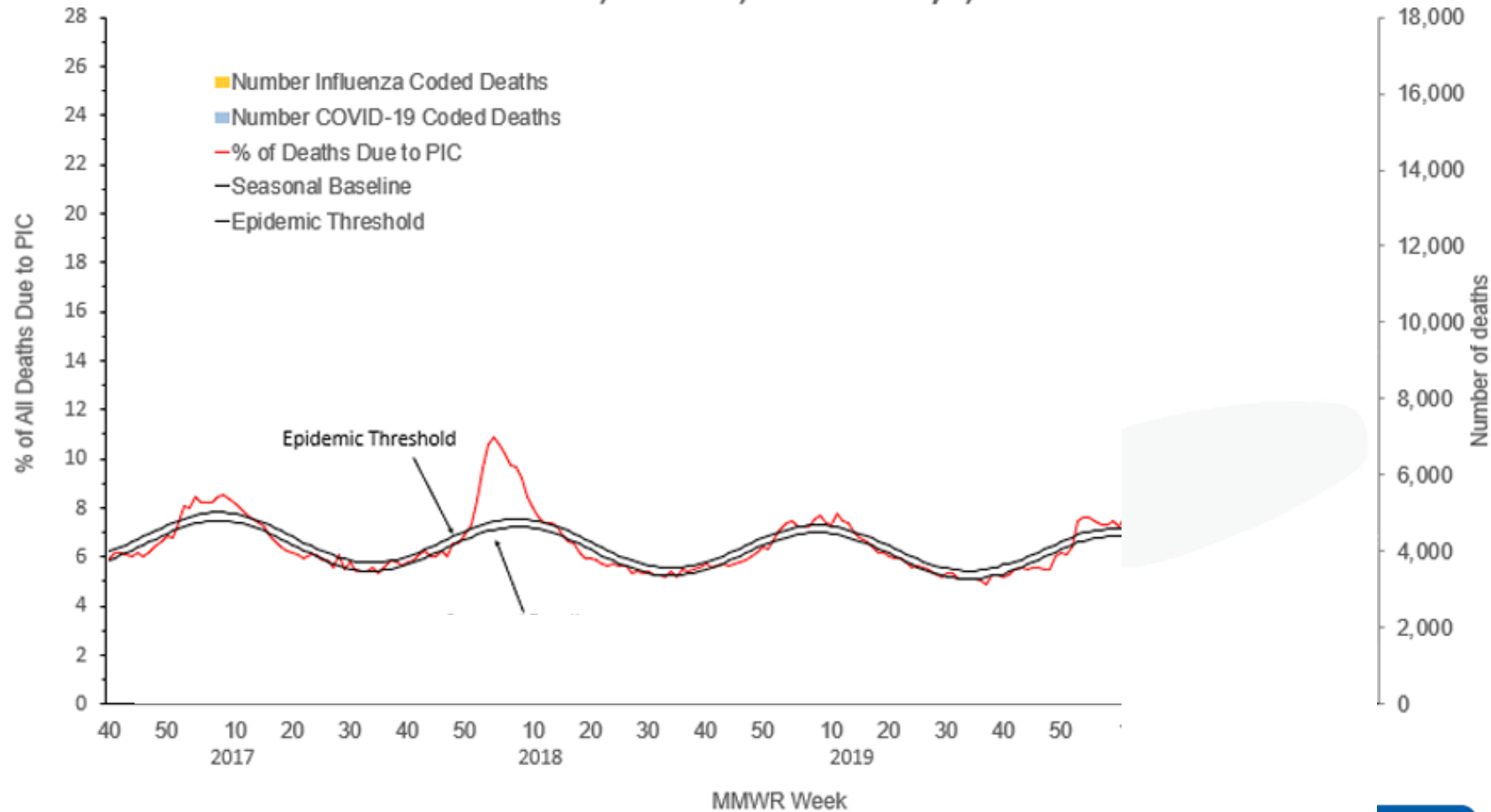
NE Population  
1.934m

- 182,418 cases (9.4%)
- 1842 deaths (1.0% CFR)

If entire state infected  
= 19,340 deaths

|    | City                         | Population |
|----|------------------------------|------------|
| 1  | <a href="#">Omaha</a>        | 475,862    |
| 2  | <a href="#">Lincoln</a>      | 283,839    |
| 3  | <a href="#">Bellevue</a>     | 53,324     |
| 4  | <a href="#">Grand Island</a> | 51,147     |
| 5  | <a href="#">Kearney</a>      | 33,464     |
| 6  | <a href="#">Fremont</a>      | 26,437     |
| 7  | <a href="#">Hastings</a>     | 24,906     |
| 8  | <a href="#">Norfolk</a>      | 24,424     |
| 9  | <a href="#">North Platte</a> | 23,892     |
| 10 | <a href="#">Columbus</a>     | 23,195     |
| 11 | <a href="#">Papillion</a>    | 20,423     |
| 12 | <a href="#">La Vista</a>     | 17,078     |

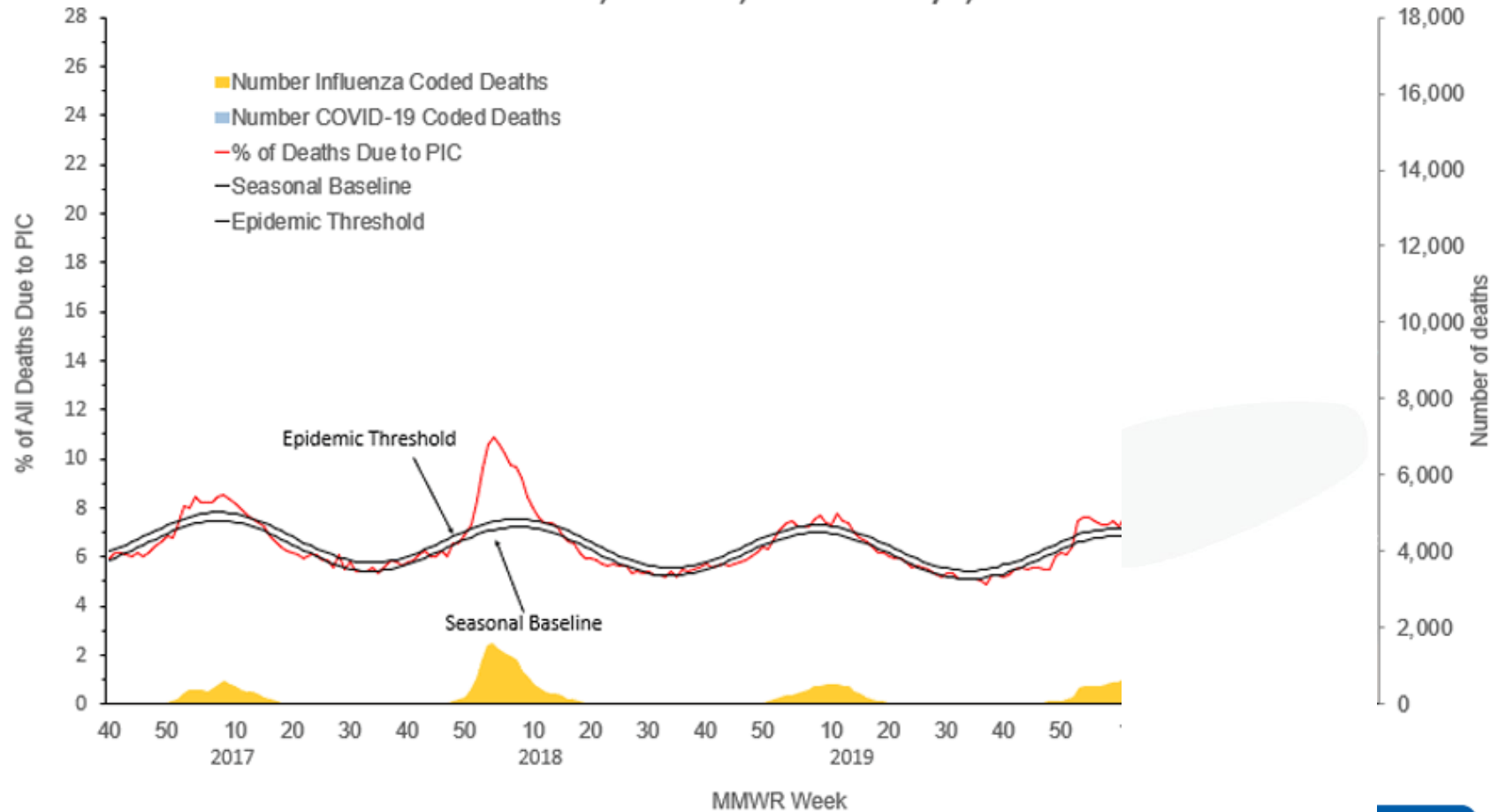
**NCHS Mortality Reporting System:  
Pneumonia, Influenza and COVID-19 (PIC) Mortality  
United States, October 2, 2016 – January 2, 2021\***



\*Data as of January 7, 2020



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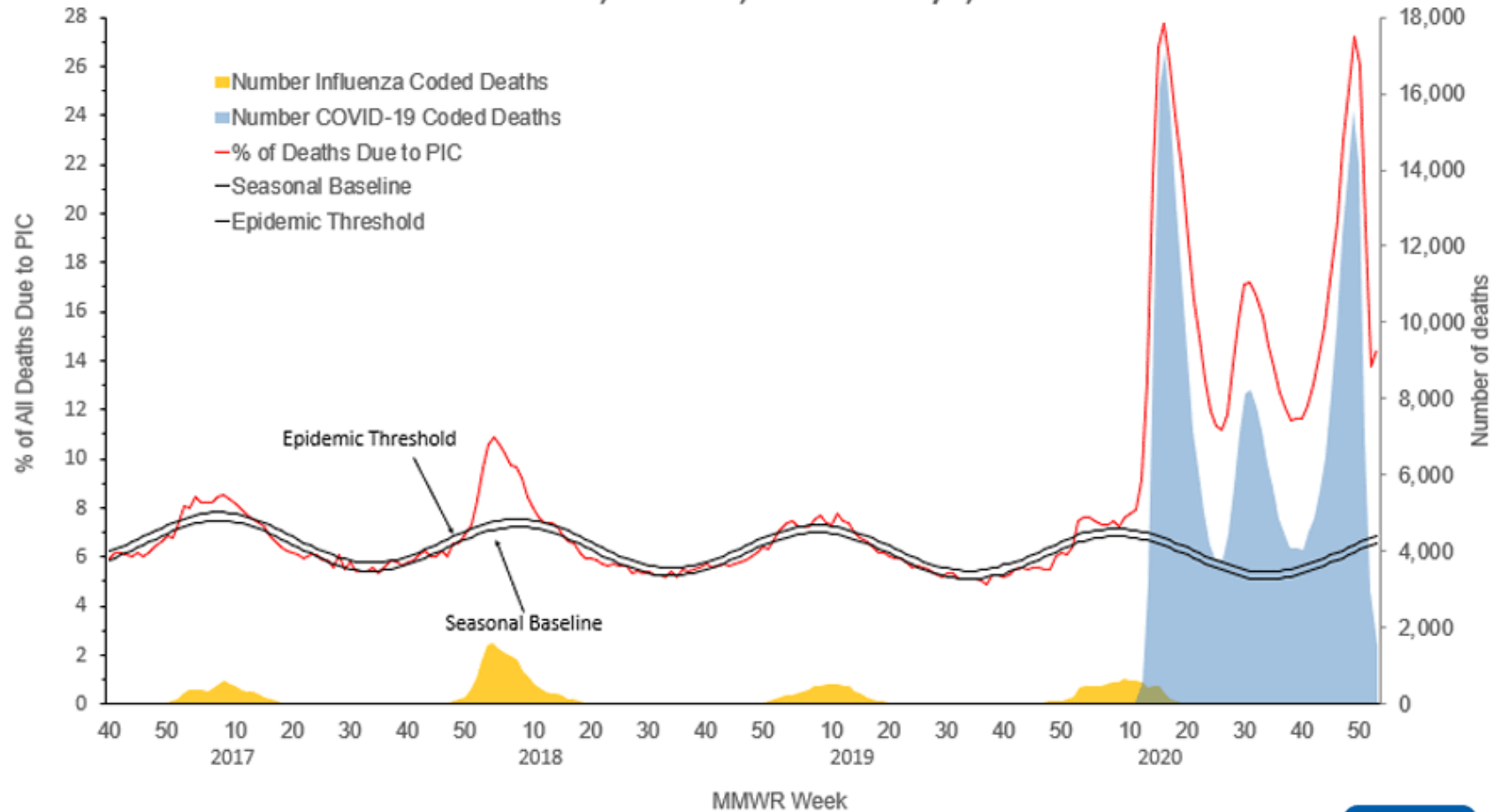


\*Data as of January 7, 2020





**NCHS Mortality Reporting System:  
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\*Data as of January 7, 2020



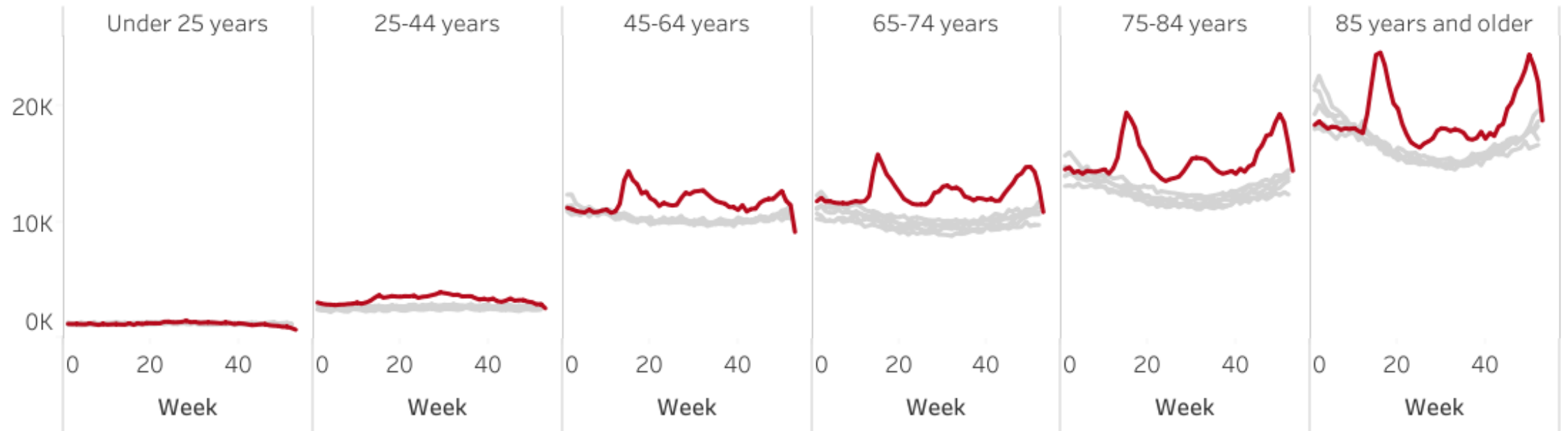
Select a jurisdiction:

United States

Select age group(s):

All

### Weekly counts of deaths by age group



Time Period

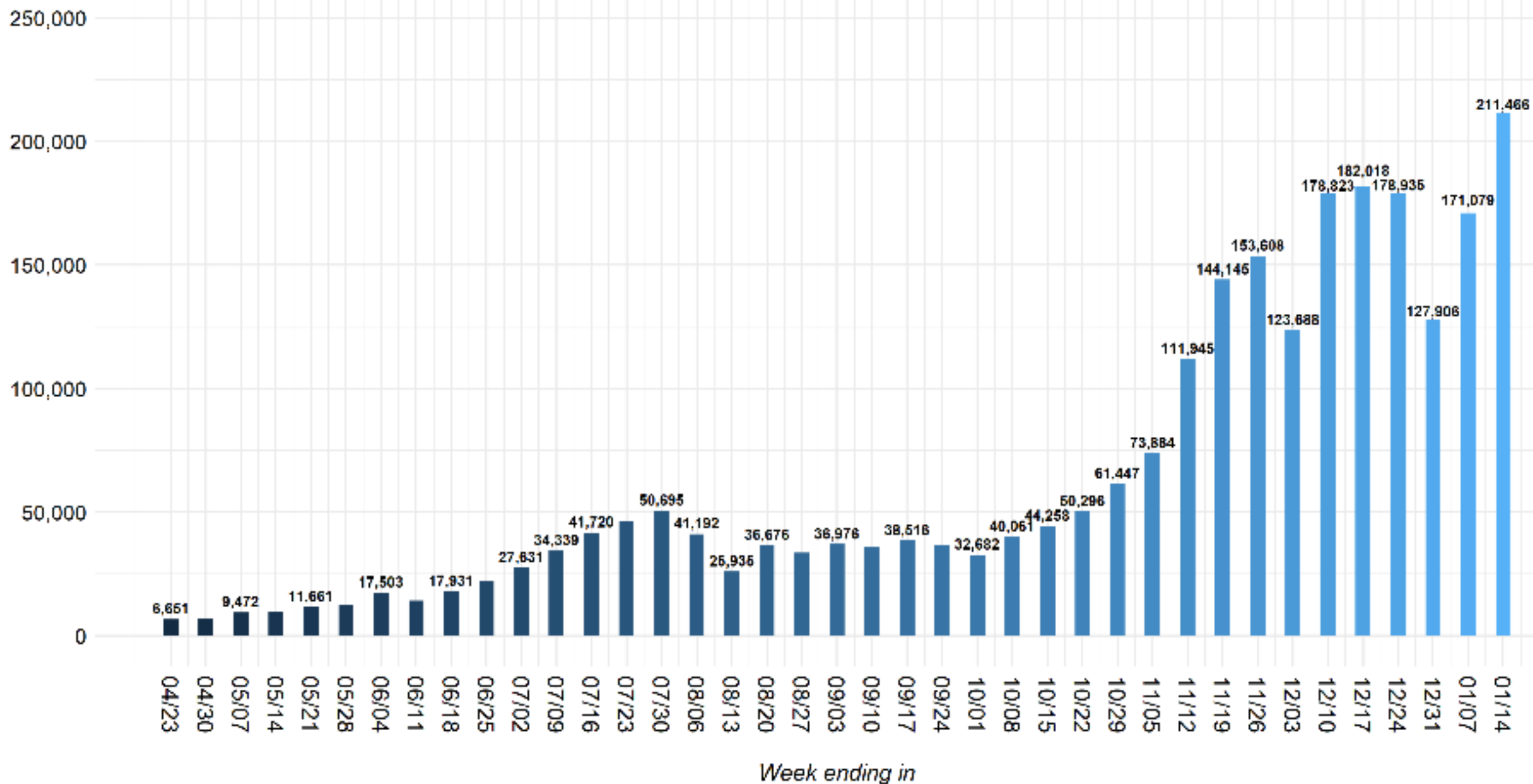
■ 2020

■ 2015-2019



Centers for Disease Control and Prevention  
National Center for Health Statistics

Number of child cases added



# Children and COVID-19: State Data Report

A joint report from the American Academy of Pediatrics and the Children's Hospital Association

## Hospitalizations (24 states and NYC reported)\*

- Children were 1.2%-2.8% of total reported hospitalizations, and between 0.2%-2.8% of all child COVID-19 cases resulted in hospitalization

| Date~   | Number of locations reporting age distribution of hospitalizations | Cumulative total hospitalizations (all ages) | Cumulative child hospitalizations | Percent children of total hospitalizations | Hospitalization rate <sup>^</sup> |
|---------|--|--|-----------------------------------|--|-----------------------------------|
| 1/14/21 | 24 states and NYC  | 560,125                                      | 10,182                            | 1.8%                                       | 0.8%                              |

## Mortality (43 states and NYC reported)\*

- Children were 0.00%-0.17% of all COVID-19 deaths, and 12 states reported zero child deaths
- In states reporting, 0.00%-0.06% of all child COVID-19 cases resulted in death

| Date~   | Number of locations reporting age distribution of deaths | Cumulative total deaths (all ages) | Cumulative child deaths | Percent children of total deaths | Percent of child cases resulting in death <sup>^</sup> |
|---------|--|------------------------------------|-------------------------|----------------------------------|--|
| 1/14/21 | 43 states and NYC  | 330,261                            | 191                     | 0.06%                            | 0.01%  |

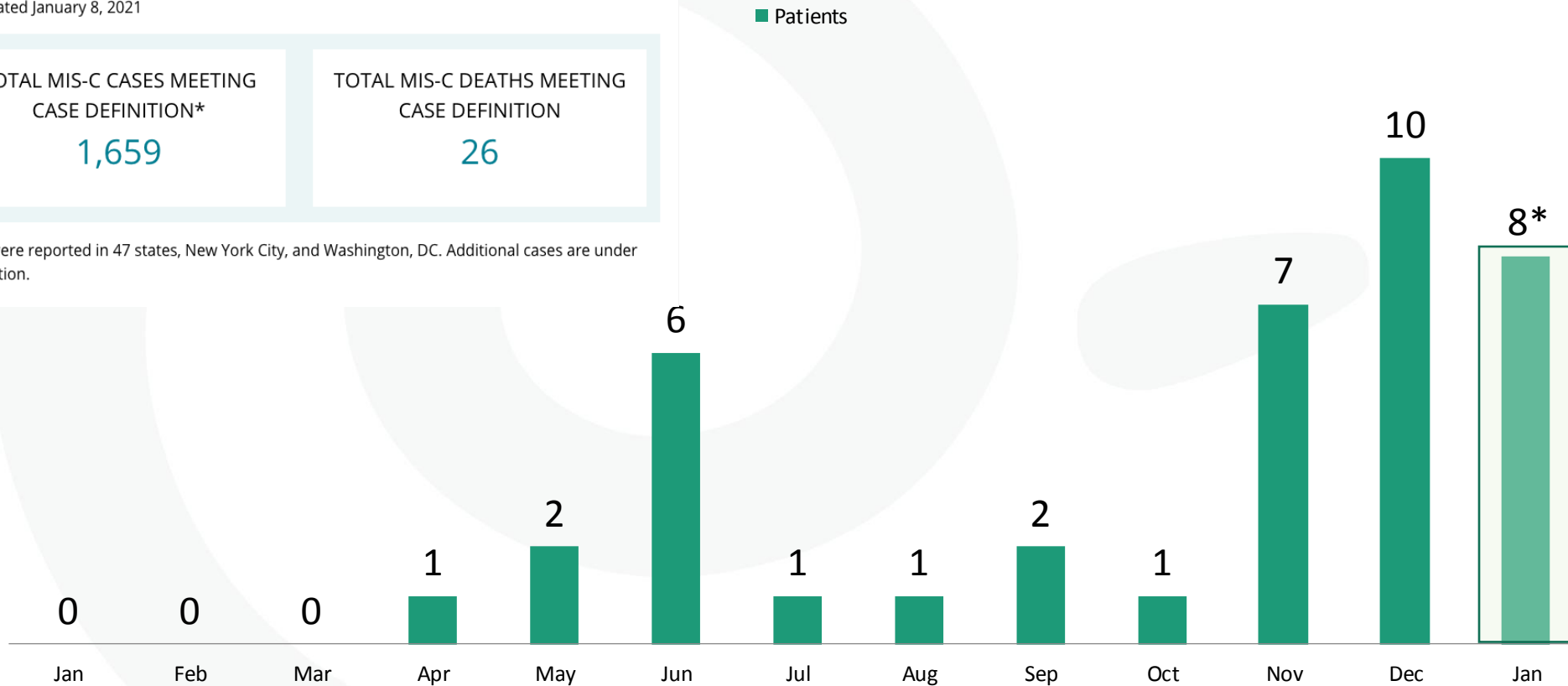
# MIS-C Patients Per Month (CHMC only)

## MISC Patients Reported

Last updated January 8, 2021

|  |  |
|--|--|
| TOTAL MIS-C CASES MEETING CASE DEFINITION* | TOTAL MIS-C DEATHS MEETING CASE DEFINITION |
| 1,659                                      | 26   |

\*Cases were reported in 47 states, New York City, and Washington, DC. Additional cases are under investigation.



"All the News  
That's Fit to Print"

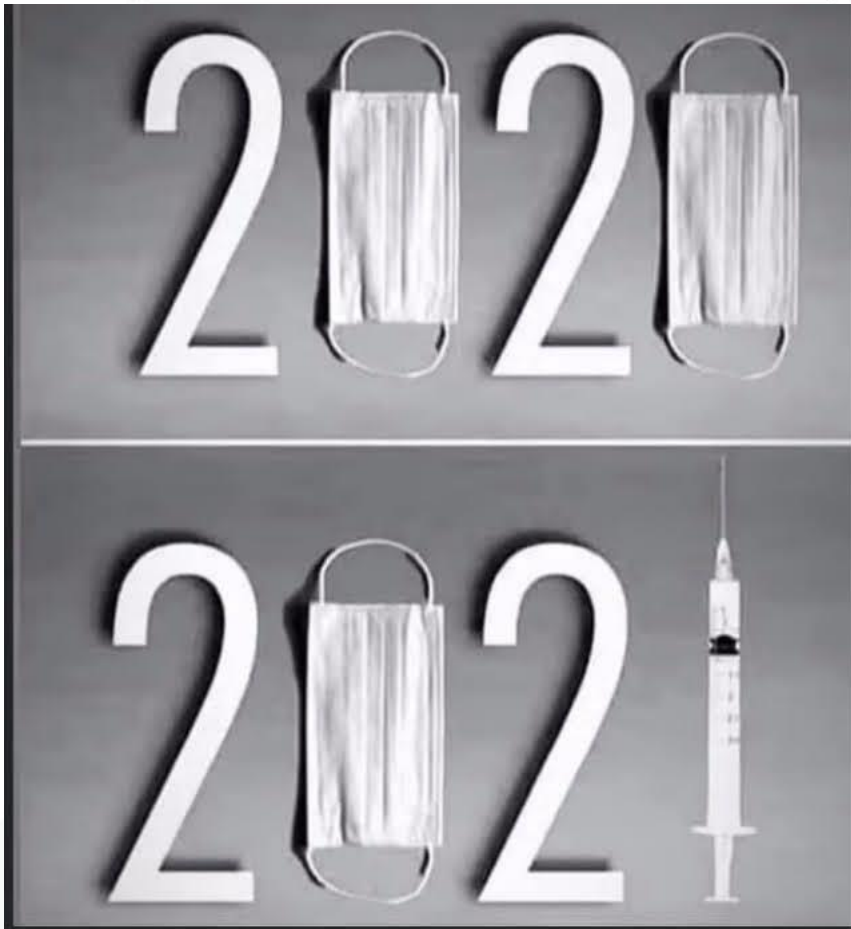
# The New York Times

VOL. CLXX ... No. 58,908

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TUESDAY, DECEMBER 15, 2020

## 'HEALING IS COMING': U.S. VACCINATIONS BEGIN



POOL PHOTO BY MARK LENNIBAN

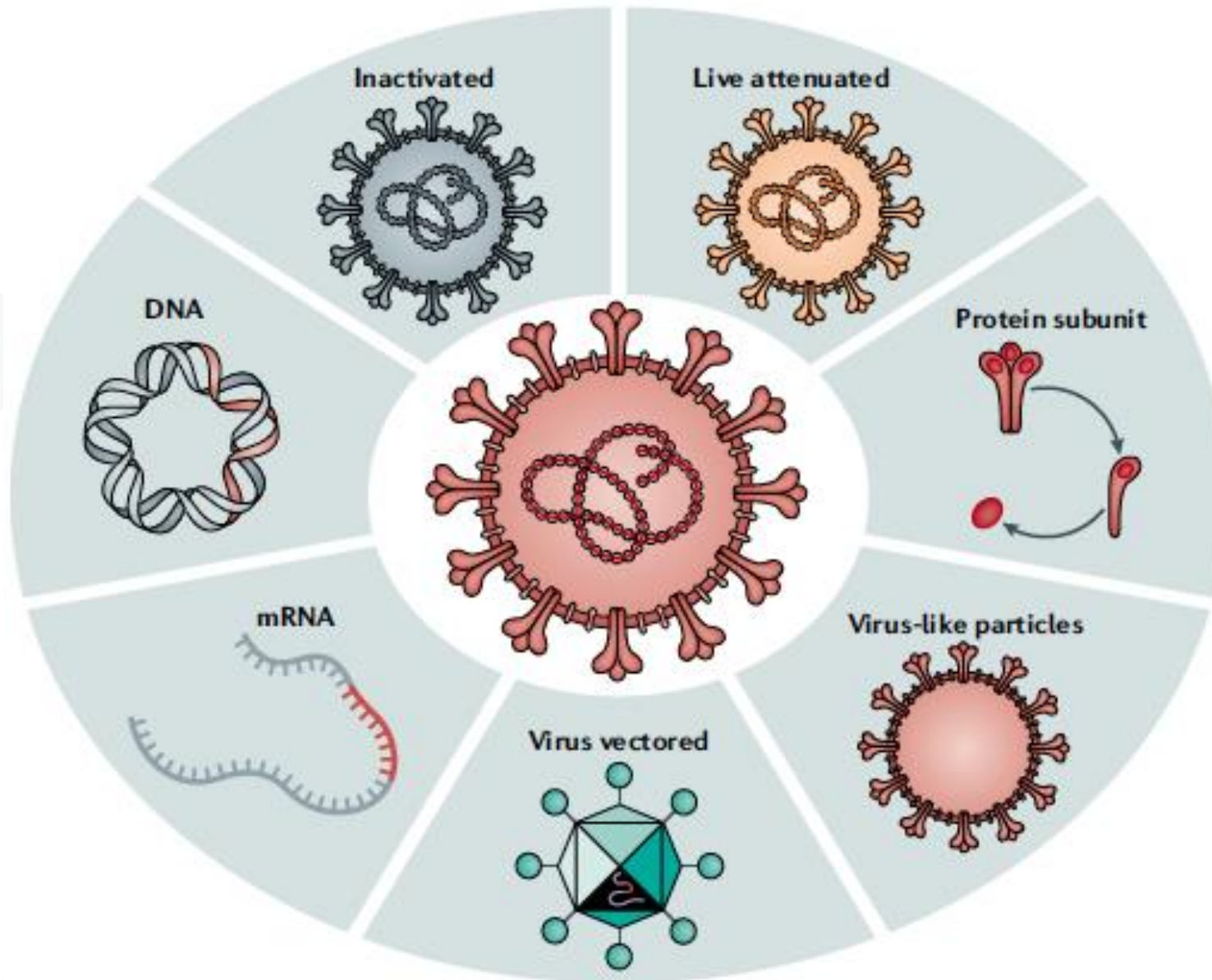
**Dread Persists as  
Death Toll Tops  
300,000**

*This article is by Campbell Robertson, Amy Harmon and Mitch Smith.*

PITTSBURGH — Some of the very medical centers that have endured the worst of the coronavirus outbreak in the United States found the gloom that has long filled their corridors replaced by elation and hope on Monday as health care workers became the first to take part in a mass vaccination campaign aimed at ending the pandemic.

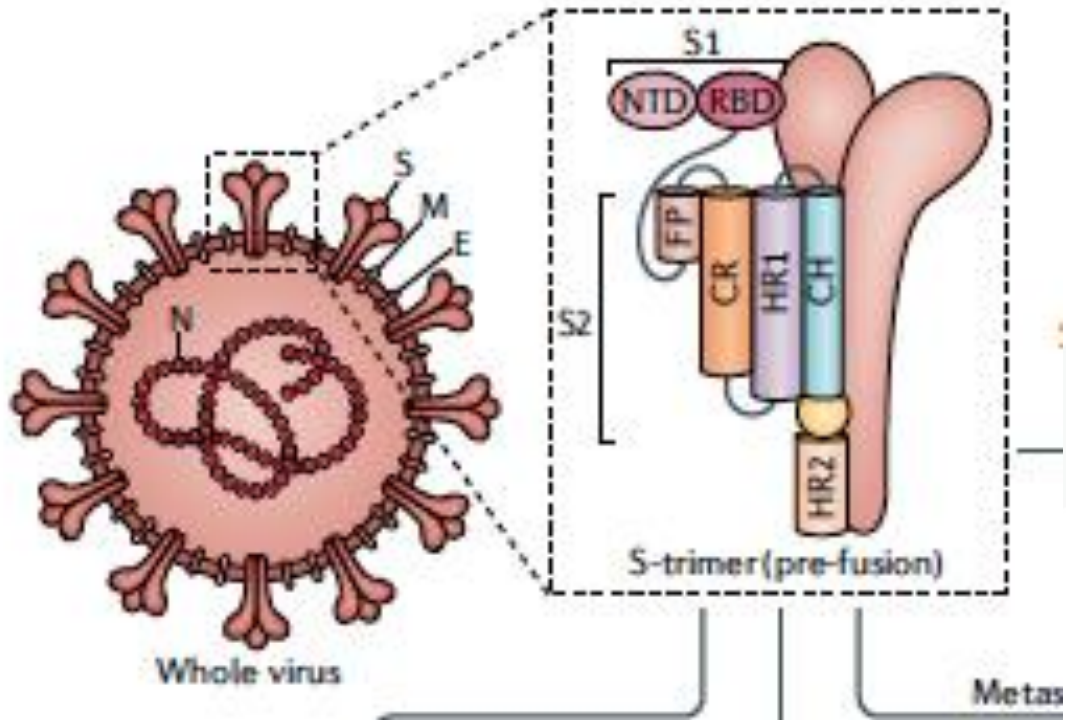
Hundreds of those who have been on the front lines of fighting Covid-19 — a nurse from an intensive care unit in New York, an emergency room doctor from Ohio, a hospital housekeeper in Iowa — received inoculations in emotional ceremonies watched by people around the country.

"I feel like healing is coming," said Sandra Lindsay, an intensive



The figure shows the seven strategies being explored as vaccines for coronavirus disease 2019 (COVID-19).

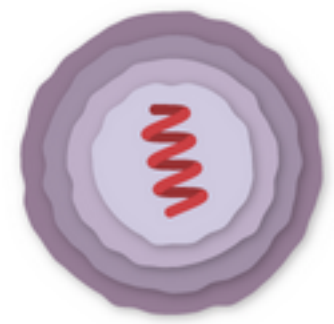
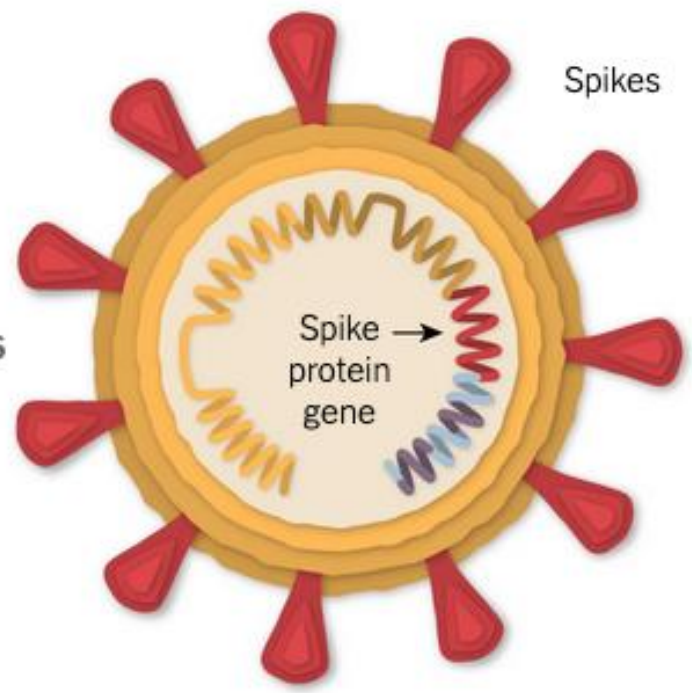
# Vaccine target: Spike protein





# Virus vs vaccine

**CORONAVIRUS**



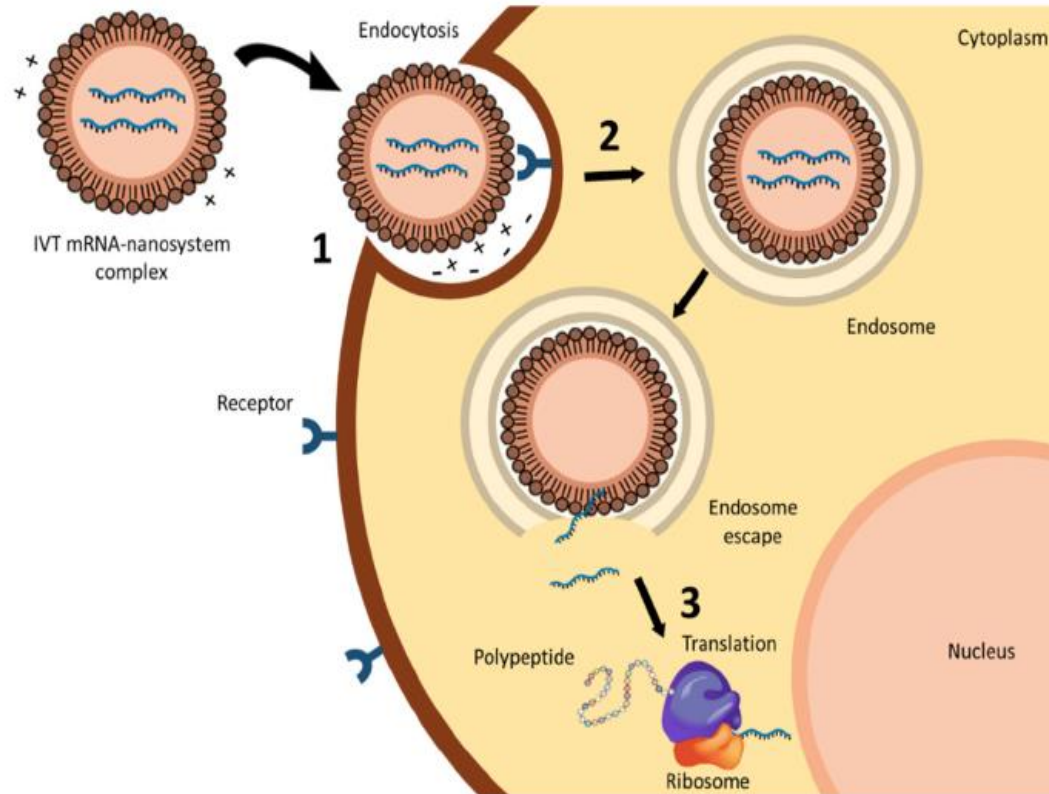
Lipid nanoparticles surrounding mRNA

domain (RBD)) (the receptor-binding motif (RBM) within the RBD is also labeled) and the S2 subunit (which includes fusion peptide (FP), connecting region (CR), heptad repeat 1 (HR1), heptad repeat (HR2) and central helix (CH)). The SARS-CoV-2 S protein binds to its host receptor, the dimeric

pre-fusion S protein is generally metastable during in vitro preparations and prone to transform into its post-fusion conformation. Mutation of two residues (K986 and V987) to proline stabilizes S protein (S-2P) and prevents the pre-fusion to post-fusion structural change.

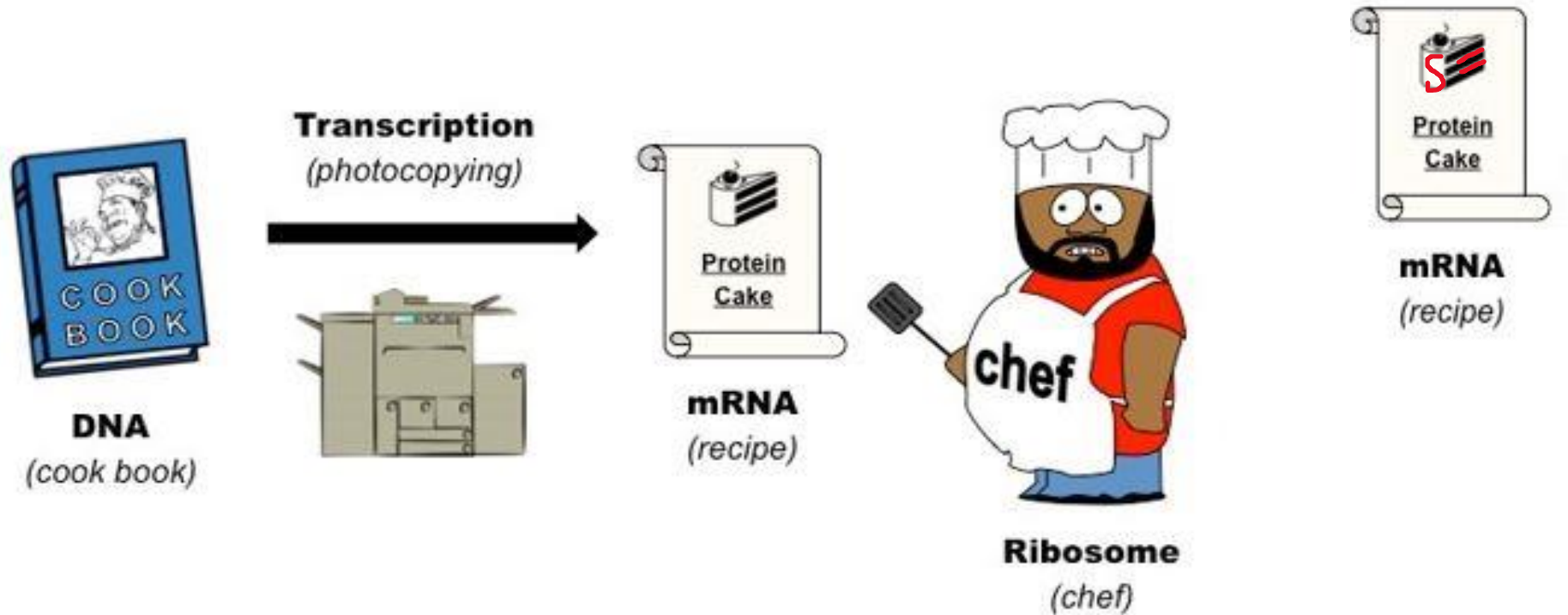
<https://www.nytimes.com/interactive/2020/health/pfizer-biontech-covid-19-vaccine.html?fbclid=IwAR2kL3gHUBrWiexGCuNfd1ODqFjZ8VvdthCGKaIUbB-Uy7NcACAc8e6eUek>

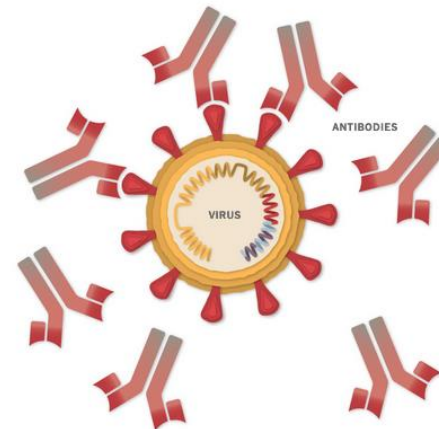
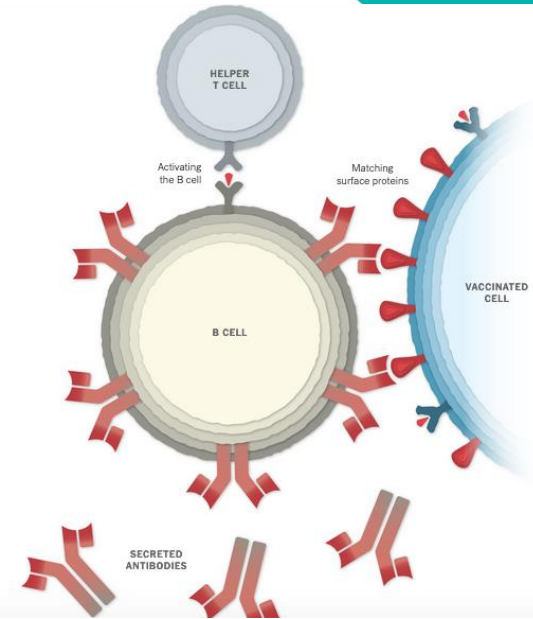
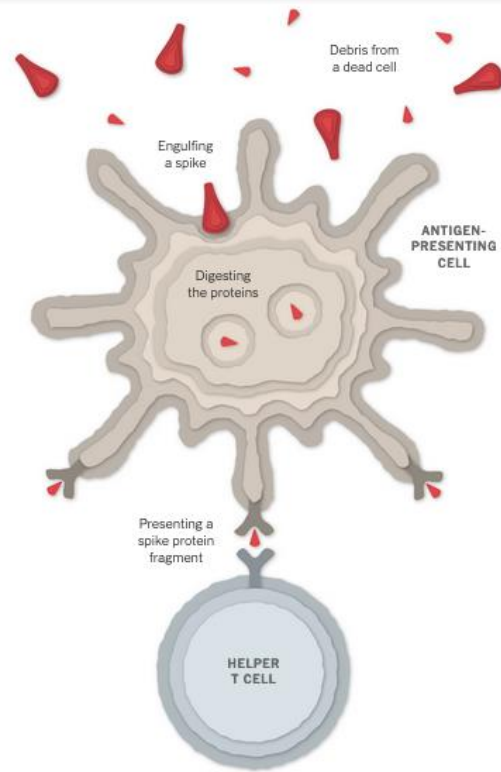
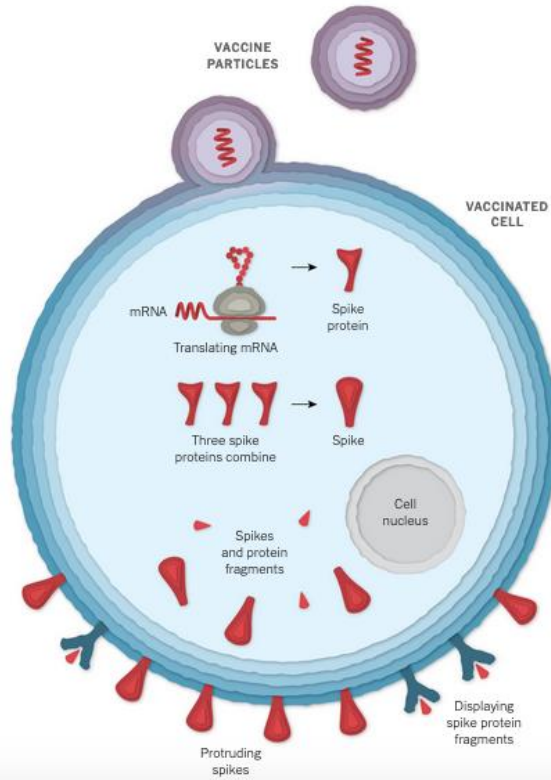
# mRNA vaccines

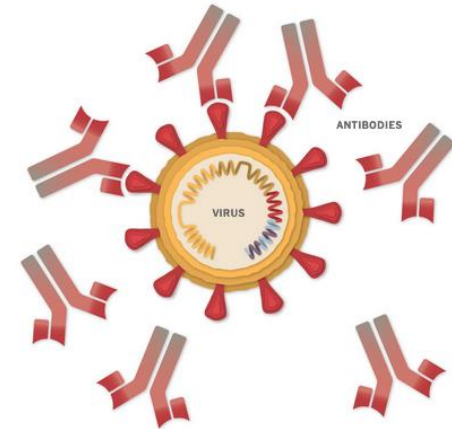
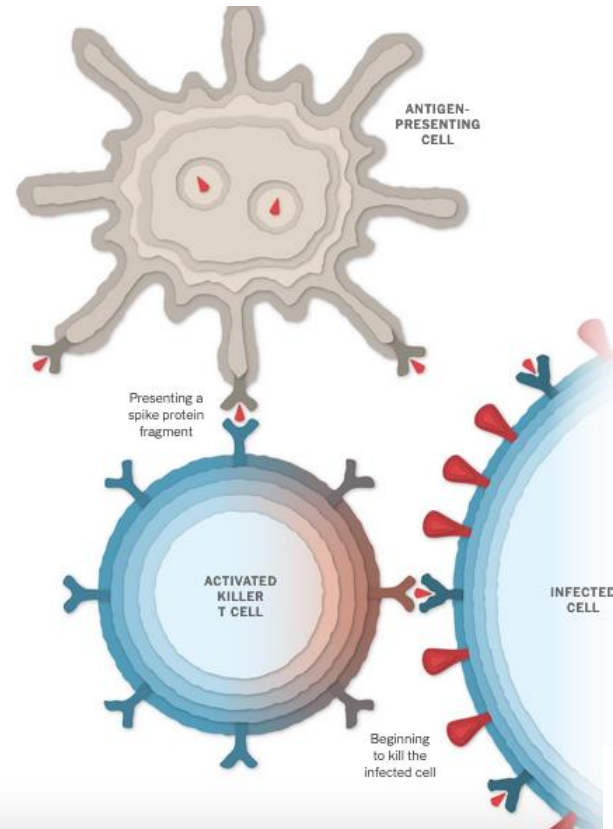
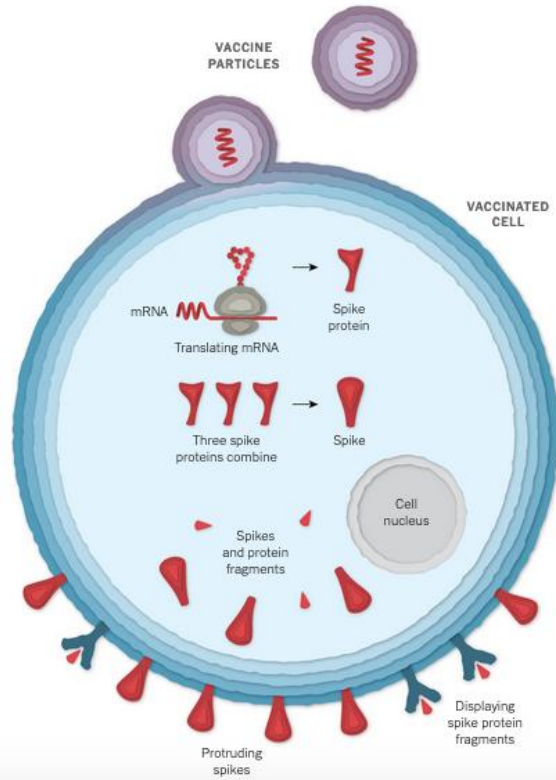


**Figure 1.** Intracellular barriers for in vitro transcribed (IVT) mRNA delivery: (1) Interaction between the delivery system and cell membrane, (2) endocytosis, and (3) endosomal escape and release of the mRNA to start the translation process.

Not “live”  
Not infectious  
No impact on DNA







# mRNA vaccine ingredients

## Pfizer-BioNTech

- **Active Ingredient**
  - nucleoside-modified messenger RNA (modRNA) encoding the viral spike glycoprotein (S) of SARS-CoV-2 with two proline substitutions (K986P and V987P)
- **Lipids**
  - (4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis (ALC-3015)
  - (2-hexyldecanoate),2-[PEG(polyethylene glycol)-2000]-N,N-ditetradecylacetamide (ALC-0159)
  - 1,2-distearoyl-sn-glycero-3-phosphocholine (DPSC)
  - Cholesterol
- **Salts/Buffers/Sugars**
  - potassium chloride
  - monobasic potassium phosphate
  - sodium chloride
  - basic sodium phosphate dihydrate
  - sucrose

## Moderna

- **Active Ingredient**
  - nucleoside-modified messenger RNA (modRNA) encoding the viral spike glycoprotein (S) of SARS-CoV-2 with two proline substitutions (K986P and V987P)
- **Lipids**
  - SM-102
    - (heptadecan-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate) is a proprietary ionizable lipid
  - polyethylene glycol [PEG] 2000 dimyristoyl glycerol [DMG]
  - 1,2-distearoyl-sn-glycero-3-phosphocholine (DPSC)
  - Cholesterol
- **Salts/Buffers/Sugars**
  - tromethamine
  - tromethamine hydrochloride
  - acetic acid
  - sodium acetate
  - sucrose

# mRNA vaccine ingredients

- No egg
- No mercury
- No preservatives
- No blood products
- No pork products
- No SARS-CoV-2 virus
- Vaccine vials do not have latex stoppers
- No microchips
- Do not contain any fetal tissue or cells
  - However, both vaccines did confirmation testing using a fetal cell line grown in the lab, derived from elective abortions in the 1970s/1980s.
  - <https://www.nebraskamed.com/COVID/you-asked-we-answered-do-the-covid-19-vaccines-contain-aborted-fetal-cells>
  - Vatican statement <https://www.catholicnews.com/vatican-without-alternatives-current-covid-19-vaccines-are-morally-acceptable/>

# How a new vaccine is developed, approved and manufactured

The Food and Drug Administration (FDA) sets rules for the three phases of clinical trials to ensure the safety of the volunteers. Researchers test vaccines with adults first.

## PHASE 1



**20-100  
healthy volunteers**



- Is this vaccine safe?
- Does this vaccine seem to work?
- Are there any serious side effects?
- How is the size of the dose related to side effects?

## PHASE 2



**several hundred  
volunteers**

- What are the most common short-term side effects?
- How are the volunteers' immune systems responding to the vaccine?

## PHASE 3



**hundreds or thousands  
of volunteers**

- How do people who get the vaccine and people who do not get the vaccine compare?
- Is the vaccine safe?
- Is the vaccine effective?
- What are the most common side effects?

**FDA licenses the vaccine only if:**

- It's safe and effective
- Benefits outweigh risks

Vaccines are made in batches called lots.

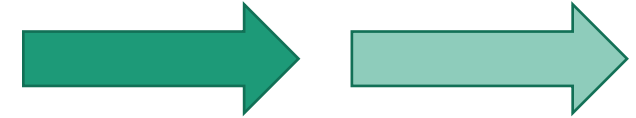


Manufacturers must test all lots to make sure they are safe, pure and potent. The lots can only be released once FDA reviews their safety and quality.

The FDA inspects manufacturing facilities regularly to ensure quality and safety.



FOR MORE INFORMATION, VISIT [HTTPS://WWW.FDA.GOV/CBER](https://www.fda.gov/cber)





# COVID-19 vaccine trials by the numbers

As of November 30, 2020

## Pfizer/BioNTech

- **43,931** enrolled
- **150** clinical sites
  - **39** U.S. states
- Racial/ethnic distribution
  - **13%** - Hispanic
  - **10%** - African American
  - **6%** - Asian
  - **1%** - Native American
- **45%** ages 56-85

## Moderna

- **30,000** enrolled
- **89** clinical sites
  - 32 U.S. states
- Racial/ethnic distribution
  - **20%** - Hispanic
  - **10%** - African American/Black
  - **4%** - Asian
  - **3%** - All others
- **64%** ages 45 and older
  - 39% ages 45-64
  - 25% ages 65+

Source: <https://www.pfizer.com/science/coronavirus/vaccine>; <https://www.modernatx.com/cove-study>

For more information, visit [www.clinicaltrials.gov](http://www.clinicaltrials.gov)

# Phase 3 Trials - Results

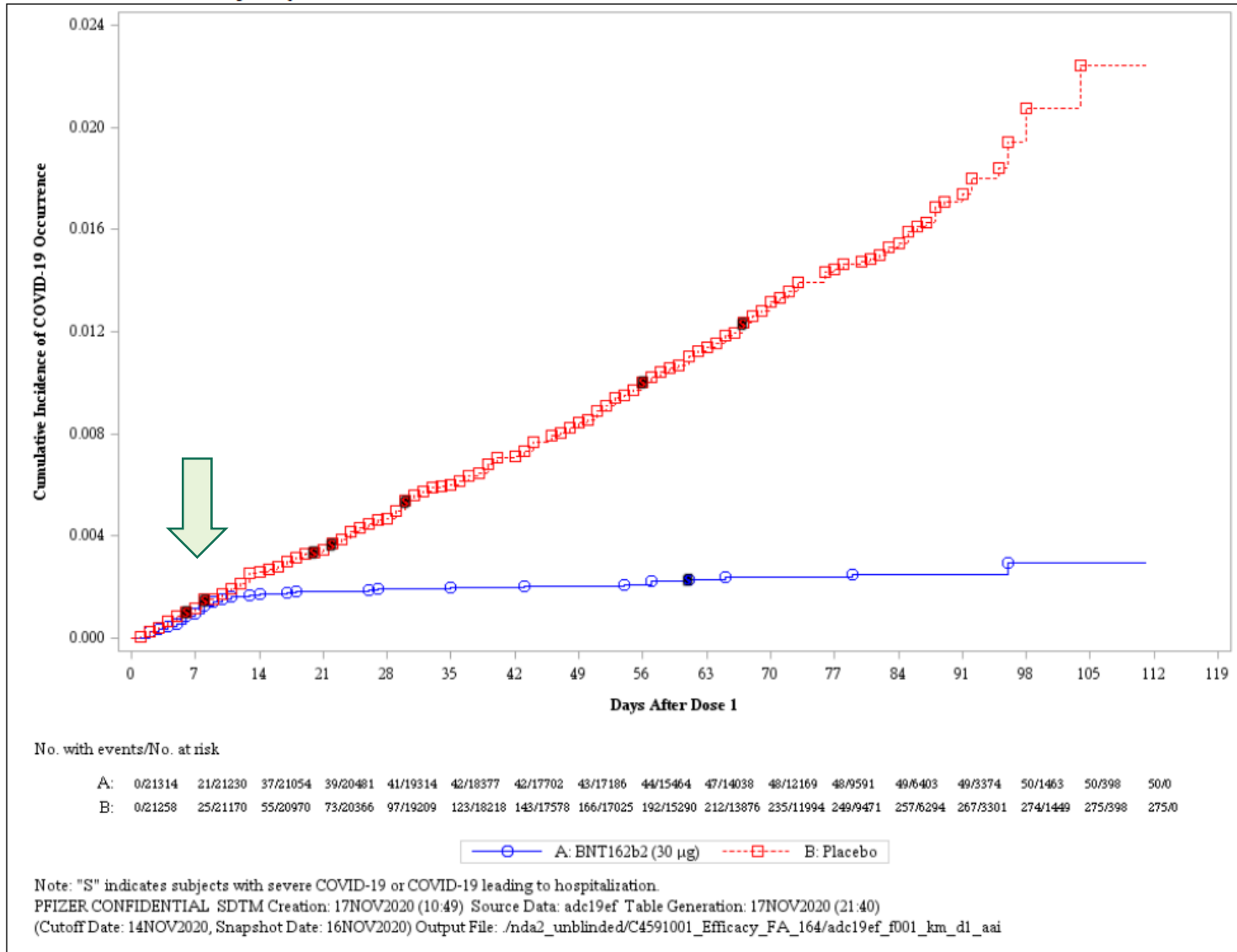
- Pfizer:

- 43,661 participants
  - All adults
  - Analysis included group >65 years old
- 170 cases of symptomatic COVID-19
  - Vaccine: 8 cases, 1 severe
  - Placebo: 162 cases, 9 severe

- Moderna:

- 30,000 participants
  - All adults
  - Analysis looked at age, ethnicity
- 95 cases of symptomatic COVID-19
  - Vaccine: 5 cases, 0 severe
  - Placebo: 90 cases, 11 severe

**Figure 2. Cumulative Incidence Curves for the First COVID-19 Occurrence After Dose 1, Dose 1 All-Available Efficacy Population**



□ Placebo

□ Vaccine

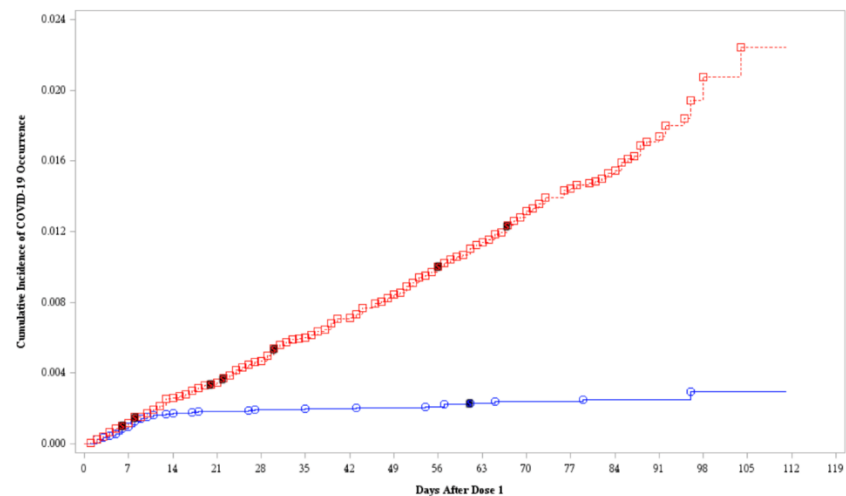
FDA would consider EUA for  
>30% VE

mRNA vaccines 90-95%

# Trial results

## Pfizer-BioNTech

Figure 13 Cumulative Incidence Curves for the First COVID-19 Occurrence After Dose 1 – Dose 1 All-Available Efficacy Population



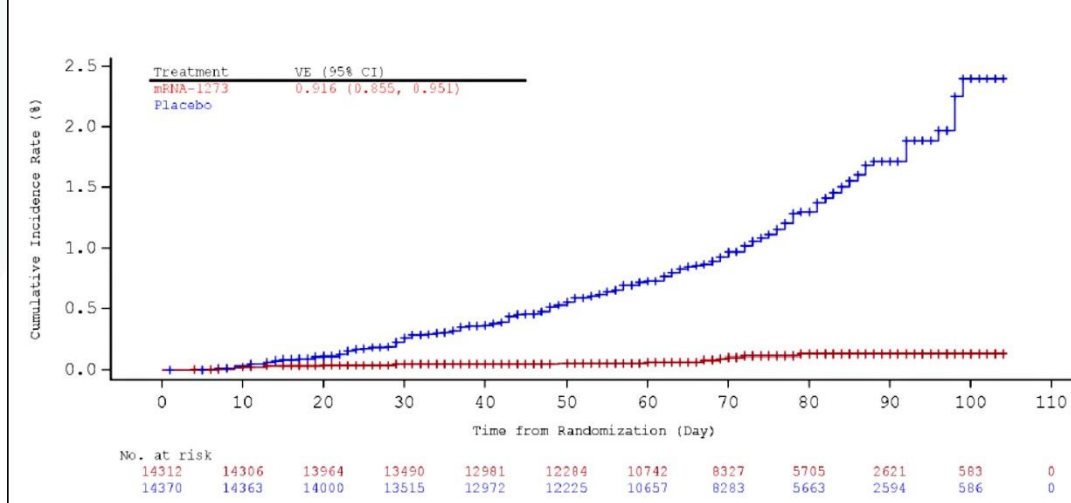
No. with events/No. at risk

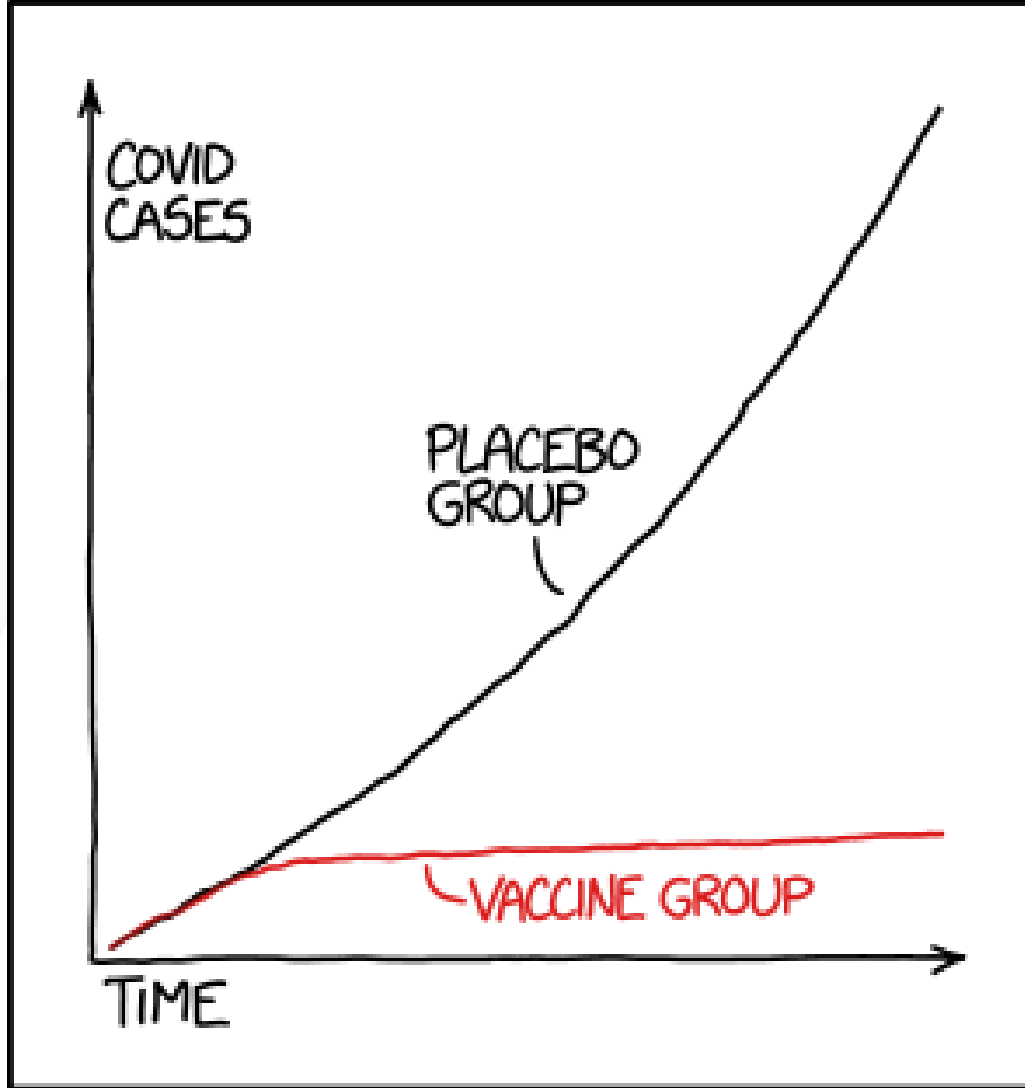
|    |         |          |          |          |          |           |           |           |           |           |           |          |          |          |          |         |       |
|----|---------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|---------|-------|
| A: | 0/21314 | 21/21230 | 37/21054 | 39/20481 | 41/19314 | 42/18377  | 42/17702  | 43/17186  | 44/15464  | 47/14038  | 48/12169  | 48/9591  | 48/5403  | 49/3374  | 50/1463  | 50/598  | 50/0  |
| B: | 0/21258 | 25/21170 | 55/20970 | 73/20356 | 97/19309 | 123/18218 | 143/17578 | 166/17025 | 192/15290 | 212/13876 | 235/11994 | 249/9471 | 257/6294 | 267/5301 | 274/1449 | 275/998 | 275/0 |

—○— A: BNT162b2 (30 µg)    - - - □ - - - B: Placebo

## Moderna

Figure 2. Cumulative Incidence Curves for the First COVID-19 Occurrence After Randomization, mITT Set





STATISTICS TIP: ALWAYS TRY TO GET  
DATA THAT'S GOOD ENOUGH THAT YOU  
DON'T NEED TO DO STATISTICS ON IT

xkcd

# 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 vaccine authorization

- **FDA** and **CDC** closely monitor vaccine safety and side effects.

# How a vaccine's safety continues to be monitored



## FDA and CDC closely monitor vaccine safety after the public begins using the vaccine.

The purpose of monitoring is to watch for adverse events (possible side effects). Monitoring a vaccine after it is licensed helps ensure that possible risks associated with the vaccine are identified.

### Vaccine Adverse Event Reporting System (VAERS)

VAERS collects and analyzes reports of adverse events that happen after vaccination. Anyone can submit a report, including parents, patients and healthcare professionals.

### Vaccine Safety Datalink (VSD) and Post-Licensure Rapid Immunization Safety Monitoring (PRISM)



Two networks of healthcare organizations across the U.S.

- VSD can analyze healthcare information from over 24 million people.

- PRISM can analyze healthcare information from over 190 million people.



Scientists use these systems to actively monitor vaccine safety.

### Clinical Immunization Safety Assessment Project (CISA)

CISA is a collaboration between CDC and 7 medical research centers.

- Vaccine safety experts assist U.S. healthcare providers with complex vaccine safety questions about their patients.

- CISA conducts clinical research studies to better understand vaccine safety and identify prevention strategies for adverse events following immunization.

Vaccine recommendations may change if safety monitoring reveals new information on vaccine risks (like if scientists detect a new serious side effect).

FOR MORE INFORMATION, VISIT [HTTPS://WWW.CDC.GOV/VACCINESAFETY](https://www.cdc.gov/vaccinesafety)

## V-safe After Vaccination Health Checker

Updated Jan. 15, 2021

Languages ▾

Print



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.

### On This Page

[Registration Process](#)

[Complete a v-safe health check-in](#)

# Safety

- Trials of mRNA vaccines have not found any significant concerns
- Bell's palsy was reported more frequently in vaccine recipients than in controls, but there was not a sufficiently large number of cases to conclude that this was beyond what would naturally be observed in populations of this size by chance.
- Anaphylaxis:
  - Risk appears to be 1 in 100,000
  - Comparison: Penicillin 1 in 5,000










# Q. What's it like to get the vaccine?

- Small needle, given in upper arm
- Local reactions most common
  - Pain (worst after 1<sup>st</sup> dose), itching, swelling
- Systemic reactions:
  - fever (more common after 2<sup>nd</sup> dose and persons <55 yo)
  - headache
  - muscle aches
- Symptom onset usually 1-2 days after immunization, lasts 1-2 days



## Vaccine Side Effects Compared

|                | <br><b>SHINGRIX</b><br><small>(ZOSTER VACCINE RECOMBINANT, ADJUVANTED)</small><br><b>Shingrix</b> | <br><b>COVID-19</b><br><b>BNT162b2</b> | <br><small>Influenza Vaccine</small><br><b>FLUCELVAX</b><br><small>QUADRIVALENT</small><br><b>Flu</b> | <br><b>Placebo</b><br><b>(saline)</b> |
|----------------|--|--|--|--|
| Local Pain     | 78%  | 83%  | 45%  | 14%  |
| Redness        | 38%  | 5%   | 13%  | 1%   |
| Swelling       | 26%  | 6%   | 4%   | 1%   |
| Myalgia        | 45%  | 21%  | 15%  | 11%  |
| Fatigue        | 45%  | 47%  | 18%  | 33%  |
| Headache       | 38%  | 42%  | 19%  | 34%  |
| Chills         | 27%  | 14%  | 6%   | 6%   |
| Fever          | 21%  | 4%   | 1%   | 1%   |
| GI Symptoms    | 17%  | 11%  | 7%   | 12%  |
| <b>Overall</b> | <b>38%</b><br>  | <b>26%</b><br>                       | <b>14%</b><br>  | <b>13%</b>   |

# Local reaction



Q. Are there contraindications to either vaccine? (who shouldn't get it)

A. Two reasons

1) Age: Pfizer – under 16, Moderna – under 18

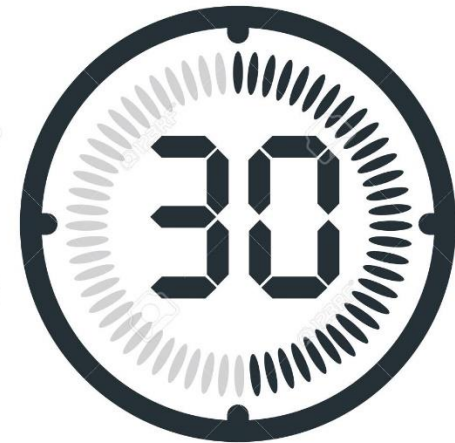
2) Allergy: known hypersensitivity to the vaccine components

- Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA Covid-19 vaccine or any of its components
- Immediate allergic reaction of any severity to a previous dose of an mRNA Covid-19 vaccine or any of its components (including polyethylene glycol [PEG])
- Immediate allergic reaction of any severity to polysorbate (due to potential cross-reactive hypersensitivity with the vaccine ingredient PEG)

Q. Even if I have other allergies?

A. Yes.

- But should be observed for 30 minutes (vs 15)



# Q: Is one vaccine better?



Prof Peter Hotez MD PhD  
@PeterHotez

1/4: An honor to be vaccinated against #COVID19 tonight @TexasChildrens @bcmhouston, dose 1/2 of the Pfizer BioNTech #vaccine



10:09 PM · Dec 15, 2020

- "One of the questions that I'm asked all the time is, 'Hey, doc, which vaccine are you waiting for?' And the answer is ... I'm going to take any of those vaccines that's made available to me that's authorized by the U.S. Food and Drug Administration," he says. "Don't overthink it. Don't wait. Get what vaccine you can." [NPR]
- Only caveat: age
  - Pfizer 16 and up
  - Moderna 18 and up

Q: Does the vaccine negatively affect fertility in women?

A: No.

- Claim made in now-defunct publication without data.
- No true homology between spike protein and syncytin-1 in the placenta, nor proof this would affect fertility
- Women infected with virus make antibodies to spike (and other viral proteins) and do not have immune reaction against placenta

COVID-19 (infection), however, has negative impacts on pregnancy and spermatogenesis (male fertility)

# Q. What about pregnancy and breastfeeding?

Pregnant and breastfeeding women were not enrolled in the trials.

- Moderna has studied gestating rats, did not demonstrate any safety concerns related to fetal or embryonal development.
- Pregnancy is a risk factor for severe disease with COVID-19.

Both the American College of Gynecology (ACOG) and the Society for Maternal-Fetal Medicine recommend consideration of vaccine be discussed with provider.

- <https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/12/vaccinating-pregnant-and-lactating-patients-against-covid-19>
- [https://s3.amazonaws.com/cdn.smfm.org/media/2591/SMFM\\_Vaccine\\_Statement\\_12-1-20\\_\(final\).pdf](https://s3.amazonaws.com/cdn.smfm.org/media/2591/SMFM_Vaccine_Statement_12-1-20_(final).pdf)



# Q. Immunocompromised patients?

High risk includes

- Cancer
  - Bone marrow transplant
  - Solid-organ transplant
  - Stem cells for cancer treatment
  - Genetic immune deficiencies
  - HIV
  - Use of oral or intravenous corticosteroids or other medicines called immunosuppressants that lower the body's ability to fight some infections (e.g., mycophenolate, sirolimus, cyclosporine, tacrolimus, etanercept, rituximab)
- Data lacking (except preliminary on well controlled HIV) for safety or efficacy
    - Not “live”
  - Should be offered given risk of severe disease
  - Trials did not see autoimmune or inflammatory disease as a result of vaccination
  - Unknown if could provoke rejection of transplant

Q. What if I already had COVID-19?

A. Prior infection does not guarantee protection, so vaccine should be offered.

- If received monoclonals (bamlanivimab; Regeneron cocktail), then wait 90 days
- No specific timing recommended after infection

Q. What about kids?

A1. If age 16+, would be eligible for Pfizer vaccine at same “place in line” as older individuals. Still need parental consent.

A2. If <16, will have to wait until we have a vaccine EUA/approved for kids. Trials 12+ underway.

Q. Do we need 2 doses?

A. Yes, and of the same kind

- The ~95% efficacy comes only after 2<sup>nd</sup> dose of either vaccine
  - Pfizer: 21 days
  - Moderna: 28 days
- Single dose efficacy wasn't studied for protection from severe disease
- Mixing doses has not been studied



Ian Myles MD/MPH

@lcdriammدمph



Replying to @KhouryMD @rubin\_allergy and 3 others

When am I protected?

Month Year Calendar



Children's  
HOSPITAL & MEDICAL CENTER

Q. Do we need THREE+ doses?

A.



Immunity – antibody levels being followed, phase 4 studies

Q. What about AFTER I'm vaccinated?

A.



Asymptomatic infection? – not fully determined

Infectious? – not determined

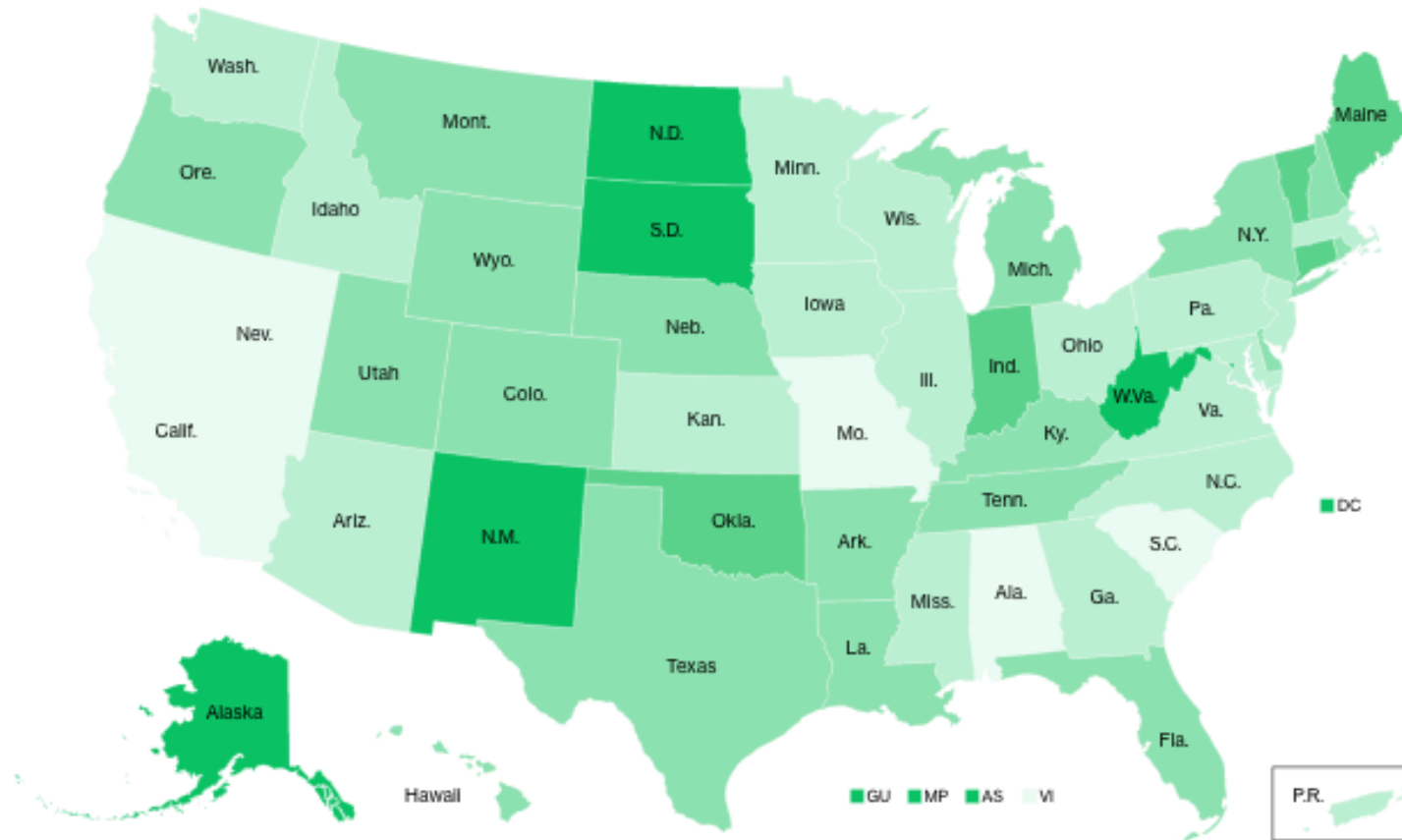
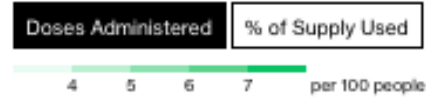
Herd immunity threshold?

High community prevalence/risk

**17.2 million shots** have been given, according to a state-by-state tally by Bloomberg and data from the Centers for Disease Control and Prevention. In the last week, an average of **912,497 doses per day** were administered.

**Vaccines Across America**

Across the U.S., 5.2 doses have been administered for every 100 people, and 48% of the shots distributed to states have been administered



Note: Data gathered from government websites, official statements and Bloomberg interviews. Local governments and the CDC sometimes report different totals for the same jurisdiction; in these cases Bloomberg uses the higher number. It can take several days for counts to be reported to databases.

1/21 (CDC):  
 13,595,803 first doses  
 2,023,124 second doses

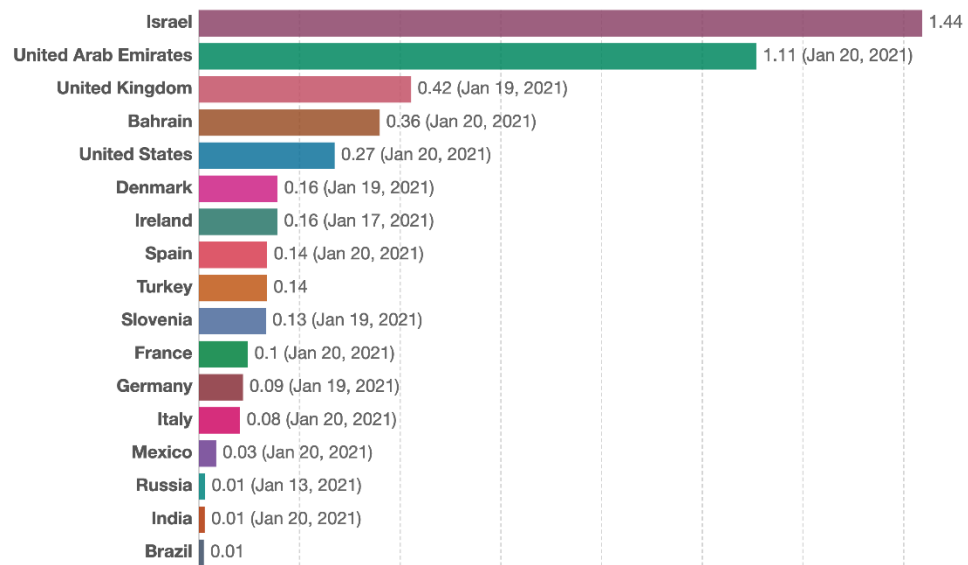
<https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/>



### Daily COVID-19 vaccine doses administered per 100 people, Jan 21, 2021

Shown is the rolling 7-day average per 100 people in the total population. This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).

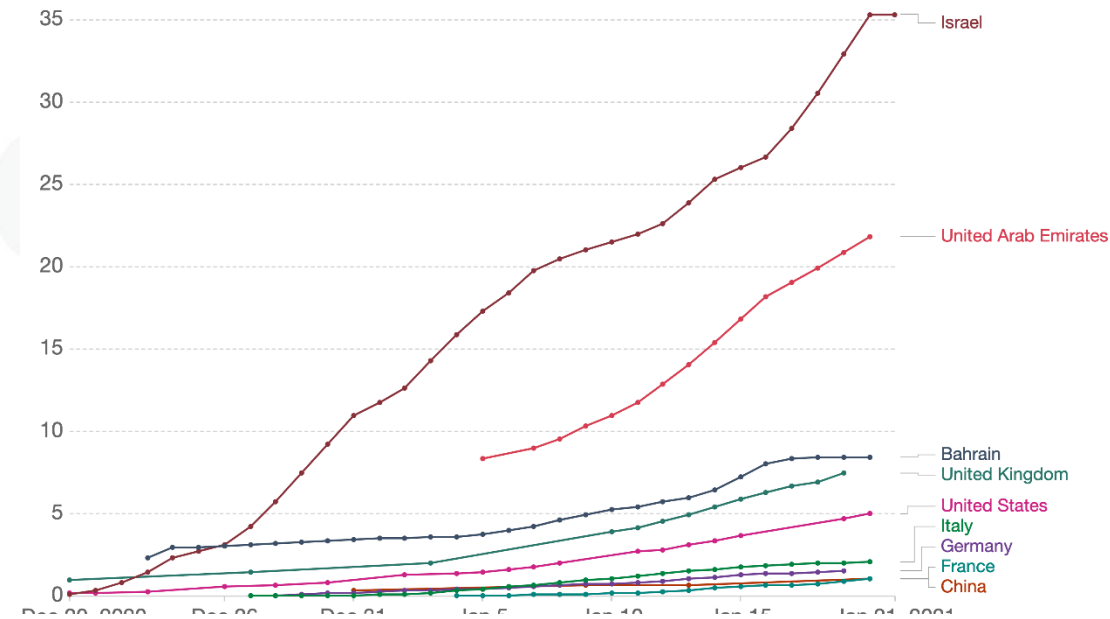
Our World  
in Data



### Cumulative COVID-19 vaccination doses administered per 100 people

This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).

Our World  
in Data



# State of Nebraska Covid-19 Vaccine Dashboard

Nebraska COVID-19 Vaccinations | Nebraska DHHS

Total Vaccines Distributed

**191,539**

Total Vaccinations Administered

**106,940**

First Dose in Series Received

**91,371**

Second Dose in Series Received

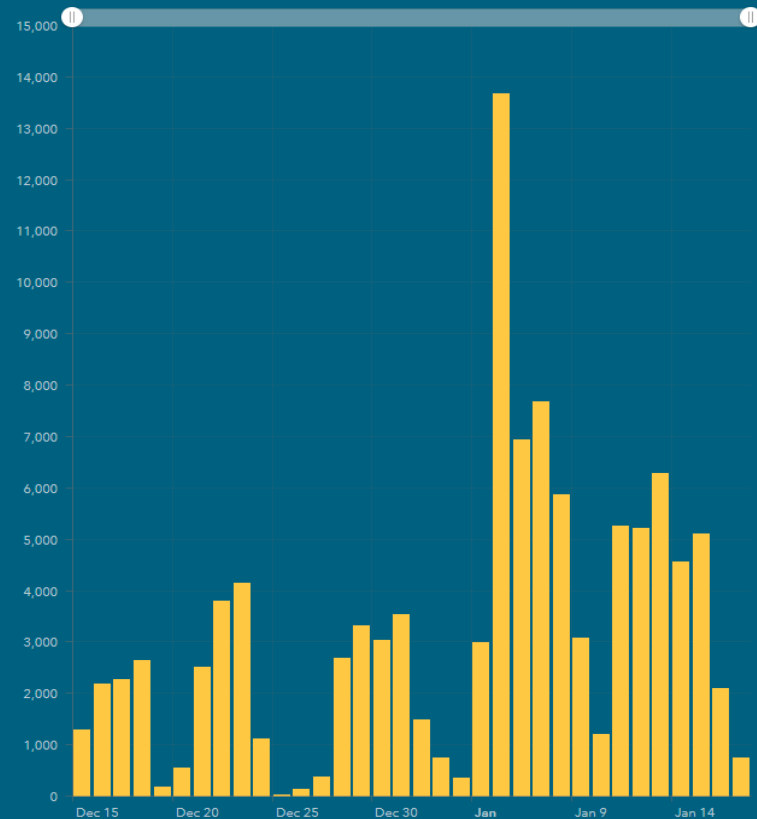
**15,569**

Percentage of Population 16 and Older Completing Vaccination

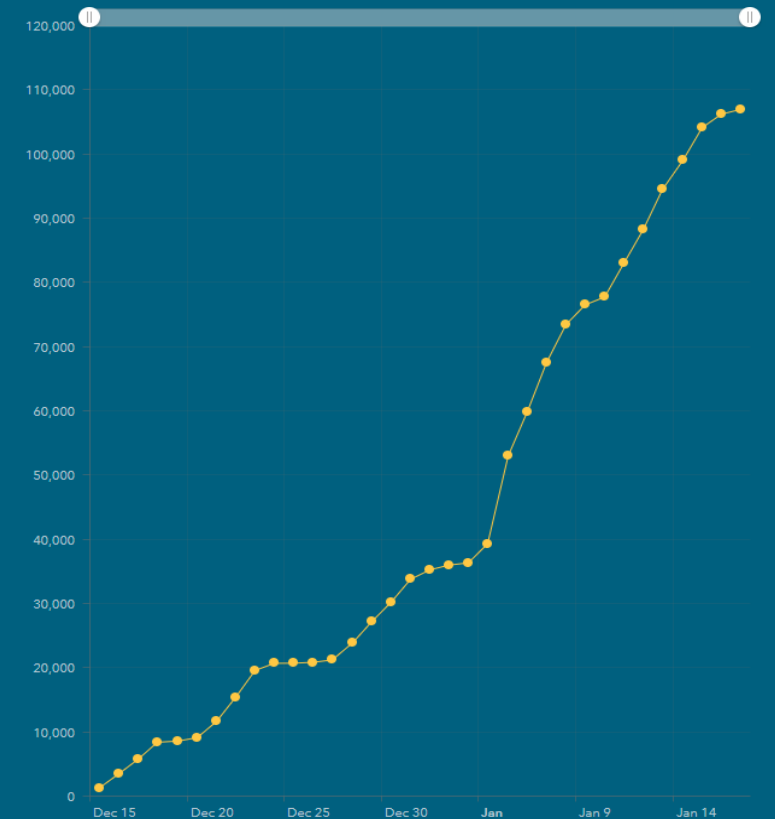
**1.05%**

of 1.48M People

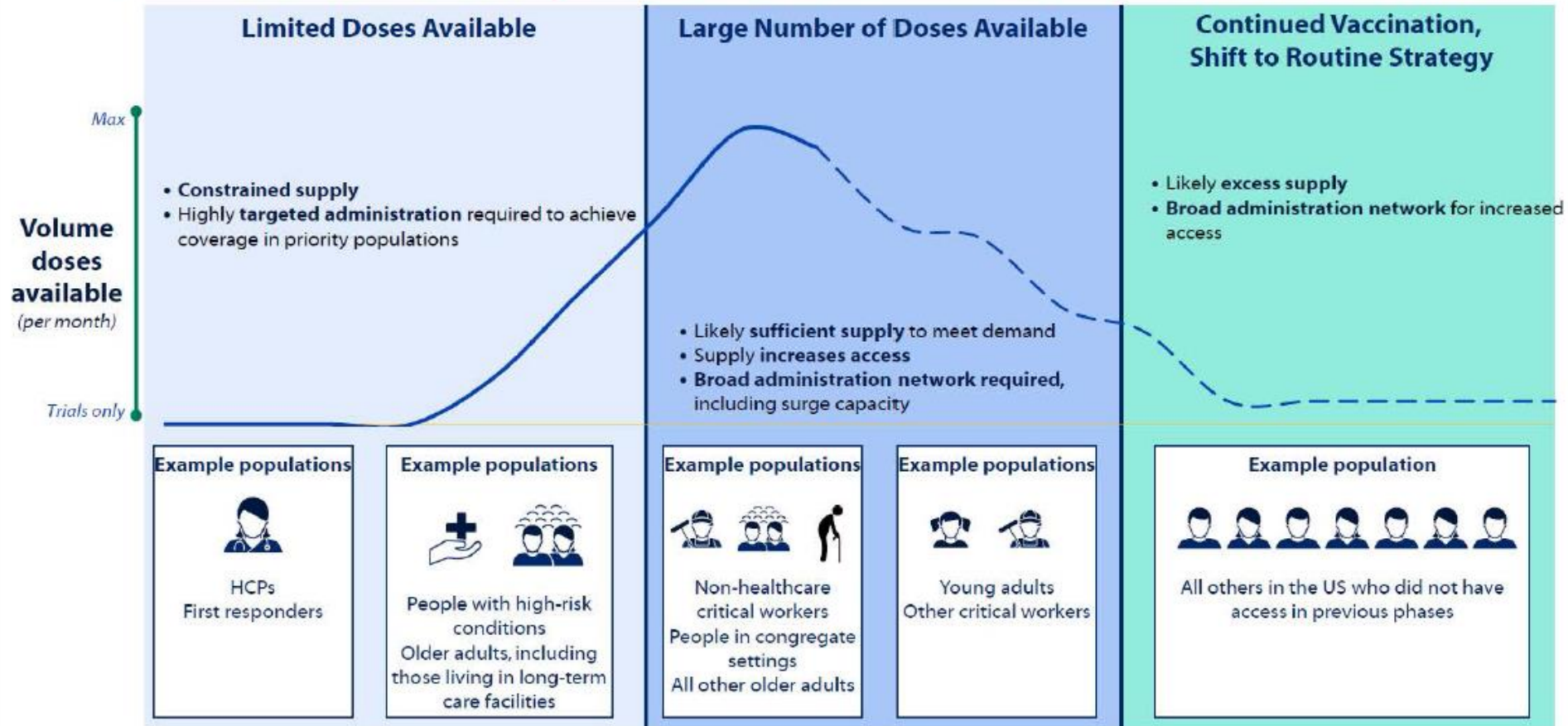
Daily New Vaccinations Administered



Cumulative Total of Vaccinations Administered



# Distribution will adjust as volume of vaccine doses increases



Kids??

Worsened disparities

# Douglas County update 1/21/21

Priority Groups and Currently Anticipated Timing of Vaccination in Douglas County (depending on vaccine availability)

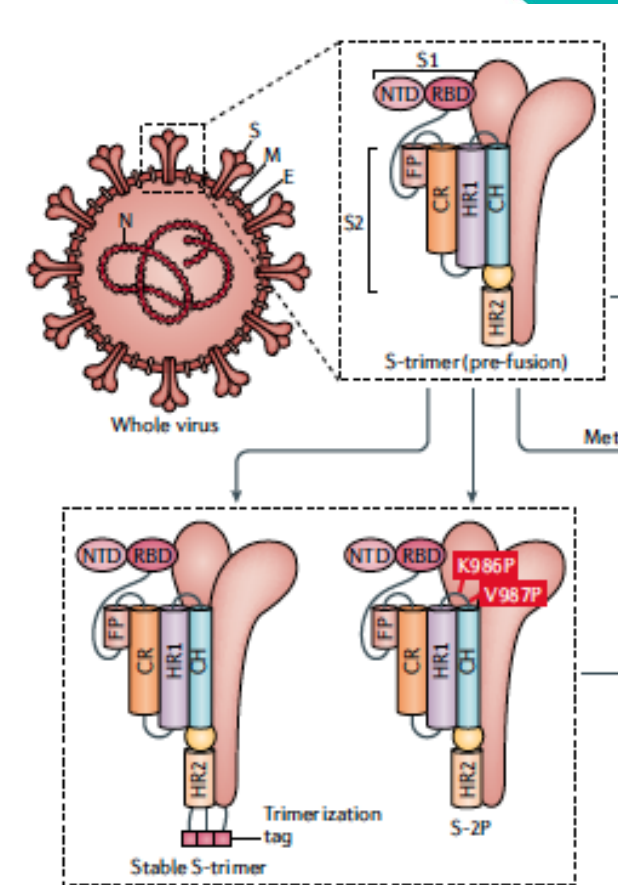
| Phase               | Priority Groups Included (see above links for more detail)  | Anticipated Timing                    |
|---------------------|---|---------------------------------------|
| 1a (All)            | Healthcare workers, emergency responders, long-term care residents and staff<br><a href="http://dhhs.ne.gov/Documents/COVID-19-Vaccine-Phase-1A-Allocation-Recommendations.pdf">http://dhhs.ne.gov/Documents/COVID-19-Vaccine-Phase-1A-Allocation-Recommendations.pdf</a>       | Entire phase 1a by the end of January |
| 1b                  | Age 65+, 18-64 years with high-risk medical conditions<br><a href="http://dhhs.ne.gov/Documents/COVID-19-Vaccine-Phase-1B-Prioritization.pdf">http://dhhs.ne.gov/Documents/COVID-19-Vaccine-Phase-1B-Prioritization.pdf</a>   | February thru March                   |
| 1b (Priority Tiers) | First responders, frontline workers who cannot work from home or with social distancing, educators, others<br><a href="http://dhhs.ne.gov/Documents/COVID-19-Vaccine-Phase-1B-Prioritization.pdf">http://dhhs.ne.gov/Documents/COVID-19-Vaccine-Phase-1B-Prioritization.pdf</a> | March thru May                        |
| 1c                  | Certain other workers, congregate settings (correctional facilities, homeless shelters)<br>TBD (will be posted here <a href="http://dhhs.ne.gov/Pages/COVID-19-Vaccine-Information.aspx">http://dhhs.ne.gov/Pages/COVID-19-Vaccine-Information.aspx</a> )                       | April to May                          |
| 2                   | Everyone else   | June to October                       |

subQ.

# What about “variants” and vaccine?

- Neutralizing antibody
- T cells
- Other factors in infectivity and disease pathogenesis/severity
- Population level of immunity needed?

Better control of community spread will **DECREASE** chance of new variants



# So for now...

- Masking
- Social distancing
- Hand washing
- Avoiding crowded, congested areas
- Ventilation

**SPEED BUMP**

DAVE COVERLY



@FacesOfCOVID

- <https://twitter.com/i/status/1316406170979106817>

# Session Feedback



An evaluation will be emailed, or you can use the link below (also in chat box).

Your feedback helps us provide you with helpful and applicable content!

<https://tinyurl.com/chmc-covid6>

*THANK YOU!*