

# I-VAC Adult Learning Collaborative for COVID-19 Vaccination



Please use your first name and health center name when you join the session



Use the “**chat**” feature to let us know if you have a question



Please remember to **mute your microphone** unless speaking



If you can't connect audio via computer or lose computer audio at anytime, you can call in to session at **(669) 900-6833, Meeting ID 999-9467-0942##**

# Disclosures

- Aniruddha (Anu) Hazra, MD has received grant funding from Gilead Sciences.
- No one else in a position to control the educational content of this activity has any relevant financial relationships with ineligible companies to disclose.
- All of the relevant financial relationships listed for these individuals have been mitigated.
- What gets said here today may change based on new data and recommendations
  - Knowledge is shared more rapidly through ECHO



## Mission

to establish and cultivate a robust knowledge network that builds community-based capacity to reduce the health disparities affecting children and adults in underserved communities

[www.echo-chicago.org](http://www.echo-chicago.org)

## Reach



**5000+**

professionals



**900+**

organizations



**34**

states



**4**

countries



## Impact

**89%**

show increased confidence in their skills after participating in training

**91%**

report at least change to their practice as a result of participating in training

## Breadth

### 30+ topic areas, including:

- Complex pediatric asthma
- Pediatric obesity
- COVID-19
- Diabetes
- Geriatrics for SNFs
- Resistant hypertension
- Childhood adversity & trauma
- Opioid use disorder
- Serious mental illness

} pediatric populations

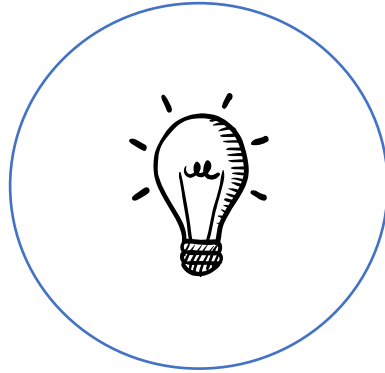
} adult populations

} behavioral health

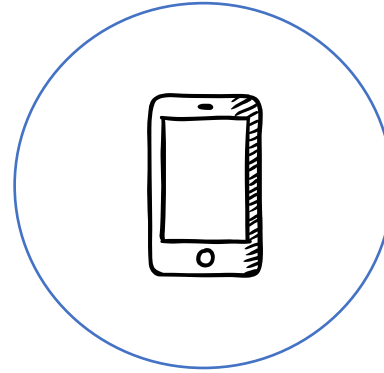
# Illinois Vaccinates Against COVID-19 (I-VAC)



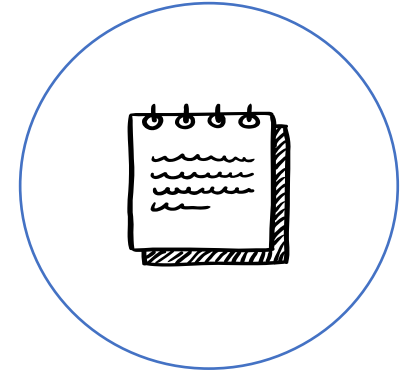
Foundational  
Training



Learning  
Collaboratives



Technical  
Assistance



Toolkit & Outreach  
Materials

Website: <https://www.illinoisvaccinates.com/>

# Session Essentials

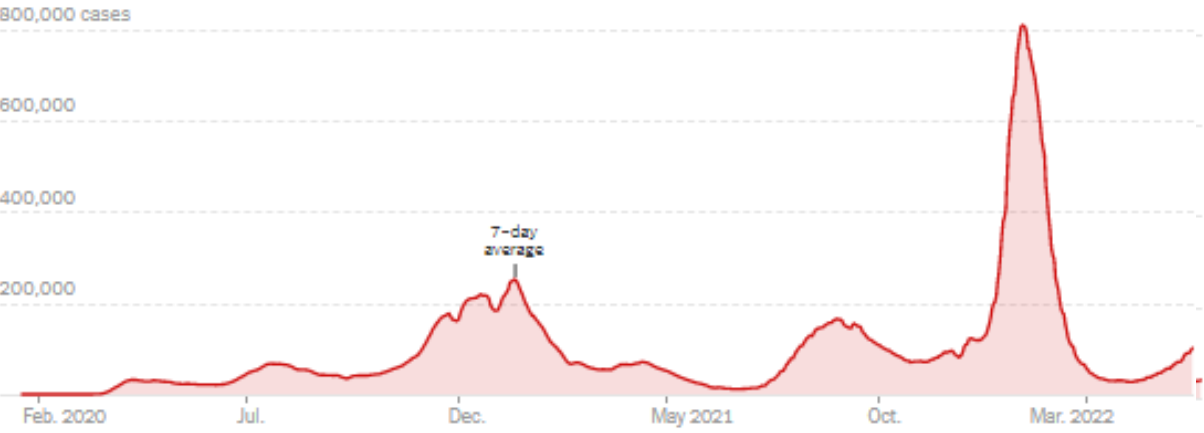
- CME credits
  - Information to claim credits will be shared at the end of August
  - 1 session = 1 *AMA PRA Category 1 Credit*™
- Cases
  - SHARE a case with us
    - Specific patient case, general issue (testing, vaccine hesitancy, etc.) or operational/logistical issue
  - Web-based electronic case submission
  - To ensure everyone has an opportunity to share, we will develop a schedule
  - If you would like to present a case at the next session, please let Kathryn know at [kshwest@peds.bsd.uchicago.edu](mailto:kshwest@peds.bsd.uchicago.edu)
- Session slides & recordings
  - Slides and recordings will be posted on <https://www.echo-chicago.org/topic/covid-19-in-adult-populations/> behind a firewall. Registration required to access



# Coronavirus in the U.S.: Latest Map and Case Count

New reported cases

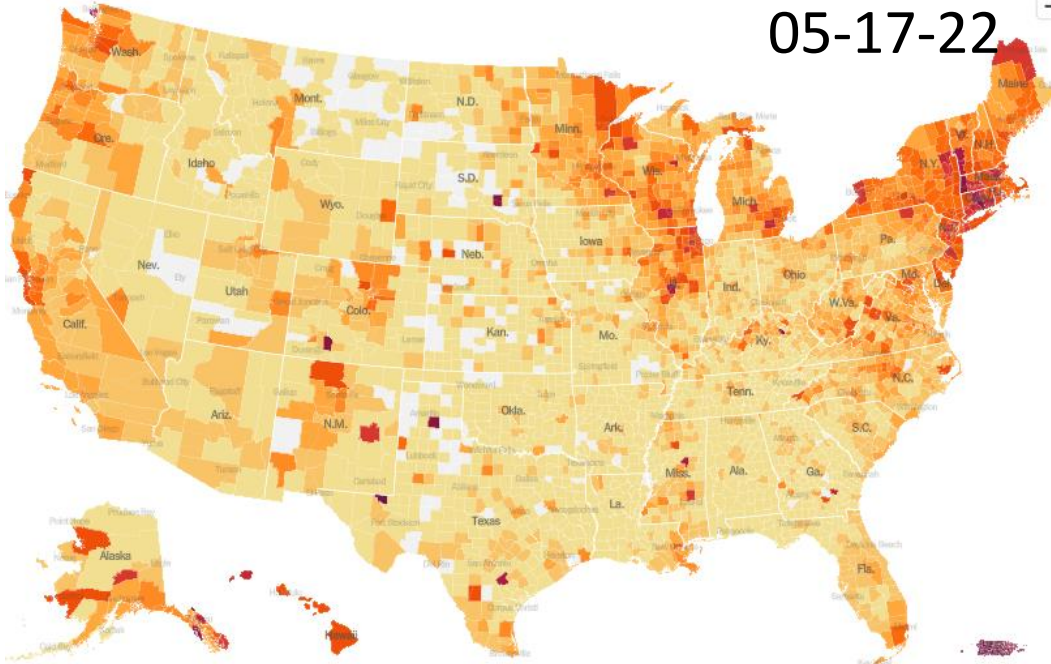
All time Last 90 days



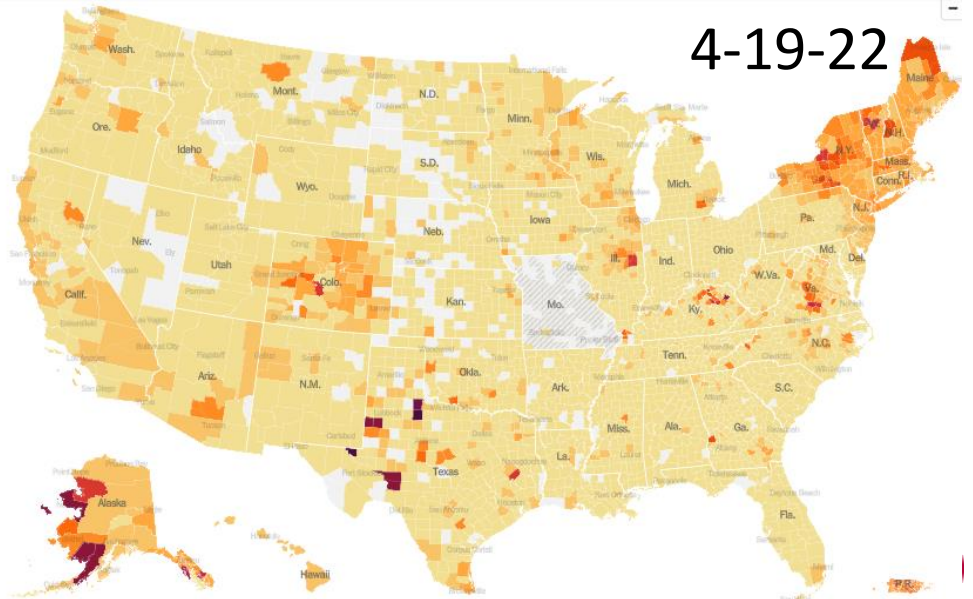
	DAILY AVG. ON MAY 17	1-DAY CHANGE	TOTAL REPORTED
Cases	100,732	+61%	82,702,870
Tests	760,609	+29%	—
Hospitalized	22,285	+25%	—
In I.C.U.s	2,368	+17%	—
Deaths	318	-7%	999,027

\*HHS data

05-17-22



4-19-22



<https://www.nytimes.com/interactive/2021/us/covid-cases.html>



May 2020

# The New York Times

"All the News  
That's Fit to Print"

VOL. CLXIX ... No. 58,703

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NEW YORK, SUNDAY, MAY 24, 2020

\$6.00

## U.S. DEATHS NEAR 100,000, AN INCALCULABLE LOSS

They Were Not Simply  
Names on a List.  
They Were Us.

Numbers alone cannot possibly measure the impact of the coronavirus on America, whether it is the number of patients treated, jobs interrupted or lives cut short. As the country nears a grim milestone of 100,000 deaths attributed to the virus, *The New York Times* scoured obituaries and death notices of the victims. The 1,000 people here reflect just 1 percent of the toll. None were mere numbers.

Patricia Dowd, 57, San Jose, Calif., auditor in Silicon Valley • **Marion Krueger**, 85, Kirkland, Wash., great-grandmother with an easy laugh • **Jermaine Ferro**, 77, Lee County, Fla., wife with little time to enjoy a new marriage • **Cornelius Lawyer**, 84, Bellevue, Wash., sharecropper's son • **Lo-reta Mendoza Dionisio**, 68, Los Angeles, cancer survivor born in the Philippines • **Patricia Friesen**, 61, Chicago, former nurse • **Luis Juarez**, 54, Romeoville, Ill., traveled often in the United States and Mexico • **Merle C. Dry**, 53, Tulsa, Okla., ordained minister • **Alan Lund**, 81, Washington, conductor with "the most amazing ear" • **Black N Mild**, 44, New Orleans, bounce D.J. and radio personality • **Michael Mika**, 73, Chicago, Vietnam veteran • **John Colaninno**, 52, New Jersey, administrator at nursing facility • **Donald Raymond Haws**, 88, Jacksonville, Fla., administered Holy Eucharist to hospital patients • **Fred Walter Gray**, 75, Benton County, Wash., liked his bacon and hash browns crispy • **JoAnn Stokes-Smith**, 87, Charleston, S.C., loved to travel and covered much of the globe • **Ronald W. Lewis**, 68, New Orleans, preserver of that city's performance traditions • **John Sebastian Laird-Hammond**, 59, Washington, D.C., member of a Franciscan monastery • **Carl Redd**, 62, Chicago, squeezed in every moment he could with his only grandchild • **Larry Rathgeb**, 90, West Bloomfield Hills, Mich., engineer behind the first 200-m.p.h. stock car • **Alvin Elton**, 56, Chicago, followed in his father's footsteps as a pipefitter • **Arnold Olwey**, 73, San Juan, Puerto Rico, educator and marathoner • **Donald J. Horsfall**, 72, Rydal, Pa., co-wrote nine books about computing • **Kevin Charles Patz**, 64, Seattle, active in the AIDS Foundation • **Mike Lengo**, 83, New York City, jazz pianist, composer and educator • **Walter Robb**, 91, New York, former General Electric Co.

real joker • **Michael Sarkin**, 71, New York City, champion of social justice through architecture • **George Valentine**, 66, Washington, D.C., lawyer who mentored others • **James Quigley**, 77, Chicago, rebel of the family • **Sherman Pittman**, 61, Chicago, dedicated his life to his church and his neighborhood • **Susan McPherson Gottsegen**, 74, Palm Beach, Fla., loyal and generous friend to many • **Andrew Koutsououlakis**, 59, New York City, trailblazer for Tribeca • **Bob Barum**, 64, St. Petersburg, Fla., leader in Florida Pride events • **Noel Sinkiat**, 64, Olney, Md., nurse planning for retirement • **Thomas E. Anglin**, 85, Cumming, Ga., created many wonderful memories for his family • **Robert Manley Argo Jr.**, 75, South Bay, Calif., member of Del Amo Flyers • **Michael McKinnell**, 84, Beverly, Mass., architect of Boston non-municipal City Hall • **Huguette Dorsey**, 94, Somerville, N.J., coached several championship-winning junior high girls basketball teams • **Lynne Sierra**, 86, Roslyn, Ill., grandmother and crossword puzzles • **Marion Lucille Kujala**, 92, Royal Oak, Mich., would use chalk and oil paints to capture family portraits • **Alice Chavdarian**, 92, Michigan, loving, generous and adventurous spirit • **Bussey Offiong**, 25, Michigan, saw friends at their worst but brought out their best • **Bobby Joseph Hebert**, 81, Cut Off, La., a 33-year career with the Louisiana Department of Transportation • **Minette Goff Cooper**, 78, Louisiana, loved big and told people she loved them all the time • **Jessica Be-atric Cortez**, 32, Los Angeles, immigrated to the United States three years ago • **Marie Caronia**, 84, Inwood, N.Y., iconic figure in the Inwood community • **April Dunn**, 33, Baton Rouge, La., advocate for disability rights • **Cedric Dixon**, 48, New York City, police detective in Harlem with a gift for interrogation • **William Helmsrich**, 74, Great Neck, N.Y., sociologist who walked New York City • **Harvey Bayard**, 88, New York, grew up directly across the street from the old Yankee Stadium • **Maxwell M. Mozell**, 90, Syracuse, N.Y., founded the Association for Chemoreception Sciences • **Timothy J. Liszewski**, 60, Columbia, S.C., active member of the South Carolina Progressive Movement • **Eastern Stewart Jr.**, 71, Annapolis, Md., veteran with a gift for peacemaking • **Freda Ocran**, 51, New York City, nurse with a zest for travel and knowledge • **Douglas Hickok**, 57, Pennsylvania, military's first virus casualty • **Luiza Ogorodnik**, 84, Skokie, Ill., emigrated from Ukraine • **Thomas A. Real**, 61, New

jazz trumpet virtuoso • **Cristina**, 64, New York City, downtown New York singer with a cult following • **Robert H. Westphal**, 75, Fond du Lac, Wis., statesman in the construction industry • **Clair Dunlap**, 89, Washington, pilot still teaching people to fly at 88 • **Marylou Armer**, 43, Sonoma Valley, Calif., veteran police detective • **Regina D. Cullen**, 81, Shrewsbury, Mass., small in stature but strong in spirit • **Sandra Santa-Vicario**, 54, New York City, beloved public school teacher • **Frank Gabrin**, 60, New York City, emergency room doctor who died in husband's arms • **Sterling E. Matthews**, 60, Midlothian, Va., cancer survivor who served as a deacon • **Alby Kass**, 89, California, lead singer of a Yiddish folk group • **Roger Eckart**, 78, Indiana, retired firefighter and old-school barber • **Mark Douglas**, 71, New York City, maestro of a steel-pan band • **Daniel Spector**, 68, Memphis, mentor to other Memphis artists • **Mary Minervini**, 91, Oak Lawn, Ill., sign-language interpreter • **Salvatore S. Podgursky**, 73, Morrisstown, N.J., loved to figure out how things worked • **Dale E. Thurman**, 65, Lexington, Ky., tailor known for his exacting work and strong opinions • **Ellis Marsalis**, 85, New Orleans, jazz pianist and patriarch of a family of musicians • **Richard Passman**, 94, Silver Spring, Md., rocket engineer in the early days of supersonic flight • **David Driskell**, 88, Hyattsville, Md., champion of African-American art • **Bucky Pizzarelli**, 94, Saddle River, N.J., master of jazz guitar • **Tariach MacNiallais**, 57, New York City, Belfast-born fighter for L.B.G. and disability rights • **Regina Dix-Parsons**, 75, Schenectady, N.Y., stalwart church gospel singer • **Lakisha Willis White**, 45, Orlando, Fla., was helping to raise some of her dozen grandchildren • **Barbara Vanebeck Vethacke**, 74, St. Clair Shores, Mich., she was known to many as Babs • **June Beverly Hill**, 85, Sacramento, no one made creamed potatoes or fried chicken the way she did • **Kimberly Nguyen**, 33, Everett, Mass., writer who inspired her Brooklyn high school students • **Kamal Ahmed**, 69, New York City, hotel banquet worker and Bangladeshi leader • **Raymond Cape-lund**, 46, New York City, sanitation worker living his fullest days • **Israel Sauz**, 22, Broken Arrow, Okla., new father • **Lester Eber**, 82, New York, worked farther behind the coades in the wine and liquor industry • **Harry P. Misthos**, 87, San Francisco Bay Area, Calif., loved the ocean and enjoyed swimming and boating • **Leo Srebnig**, 98, Seattle, preferred bold ties to neckties, suspenders to belts • **Robert Barghaan**, 88, New York City, could fix almost anything • **Patricia H. Thatcher**, 79, Clifton Park, N.Y., sang

spirit • **Jack Butler**, 78, Indiana, lived in the house he grew up in • **Susan Grey Hopp Crofoot**, 97, Westwood, N.J., took great joy in writing little ditties under her pen name, Penelope Pen-wiper • **James David Gewirtzman**, 72, New York City, N.Y., spent some of his happiest hours hiking in the Adirondacks • **Henry E. Graff**, 98, Greenwich, Conn., Columbia University historian of U.S. presidents • **Mari Jo Davitto**, 82, Thornton, Ill., people were her hobby • **Vaakov Perlov**, 89, New York City, leader from Harvard Law School • **Vincent Lioni**, 60, New York City, Met Opera violinist and youth orchestra conductor • **Ann Youngerman Smoler**, 57, New York City, had a passion for social justice • **Thomas Waters**, 56, New York City, armed the affordable housing movement with data and analysis • **Loke Workoff**, 33, Huntington, N.Y., his relentless passion was for his family and friends • **José Diaz-Ayala**, 38, Palm Beach, Fla., served with the Palm Beach County Sheriff's Office for 14 years • **Antonio Nieves**, 73, Clarksburg, W. Va., backyard birds were known to eat from her hand • **Fanny Havir**, 92, Minnesota, her favorite thing was meeting new people • **Torin Jamal Howard**, 26, Waterbury, Conn., gentle giant, athlete and founder of the American Place Theater • **Adam Kovacs**, 72, New York City, cartoonist and an expert on musicals • **Peter Brown**, 53, New Jersey, manager of the S.W. Brown & Son Funeral Home • **Frene Gasior**, 94, Pennsylvania, great-grandmother with a flair for pizzelles • **Stanley L. Morse**, 88, Stark County, Ohio, trombonist who once turned down an offer to join Duke Ellington's orchestra • **Margaret Laughlin**, 91, Massachusetts, had a mystic's direct sense of wonder and oneness • **Cynthia Whiting**, 66, La Plata, Md., retired determined to spoil her granddaughter • **Steve Jotin**, 75, Rockville, Md., L.T. manager with "an eye for beautiful and unusual things" • **Ger-ald Glenn**, 66, Richmond, Va., police officer turned pastor • **Maclure Jacoby Jr.**, 89, Washington, D.C., inspiring math teacher • **Doris Mae Burkhardt Kale**, 98, Pennsylvania, excelled in the kitchen • **Josphine Posnanski**, 93, New Jersey, loved to dance • **Phil Langley**, 83, Frankfurt, Ill., member of Harless Racing Hall of Fame • **Vinton Timely Mason**, 86, Beaumont, Mich., co-owned the Bark-and-All logging company • **Maria Garcia-Rodolo**, 52, Nevada, would walk her children to school every morning • **Fernando Miteff**, 60, New York City, graffiti artist with a generous spirit • **John Watson**, 73, Philadelphia, anywhere he went, he took pictures • **John Posson**, 93, North Bergen, N.J., editor at the Ladies' Home Journal • **John B. Lynch**, 76, Wilmington, Mass., lifelong educator • **Orlando Moncada**, 56, Bronxville, N.Y., left Peru and grabbed hold of the American dream • **John Scholstall**, 41, Terre Haute, Ind., volunteer youth football coach • **Theodore Gaffney**, 92, Washington,

May 2022

# The New York Times

"All the News  
That's Fit to Print"

VOL. CLXXI ... No. 99,424

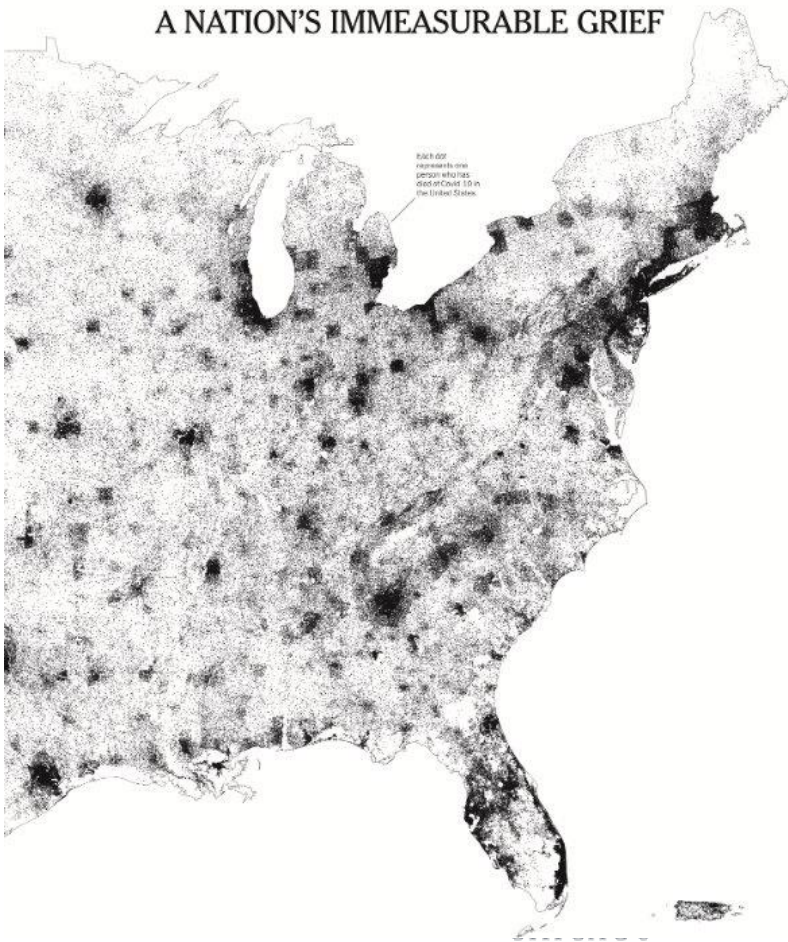
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NEW YORK, SUNDAY, MAY 15, 2022

\$6.00

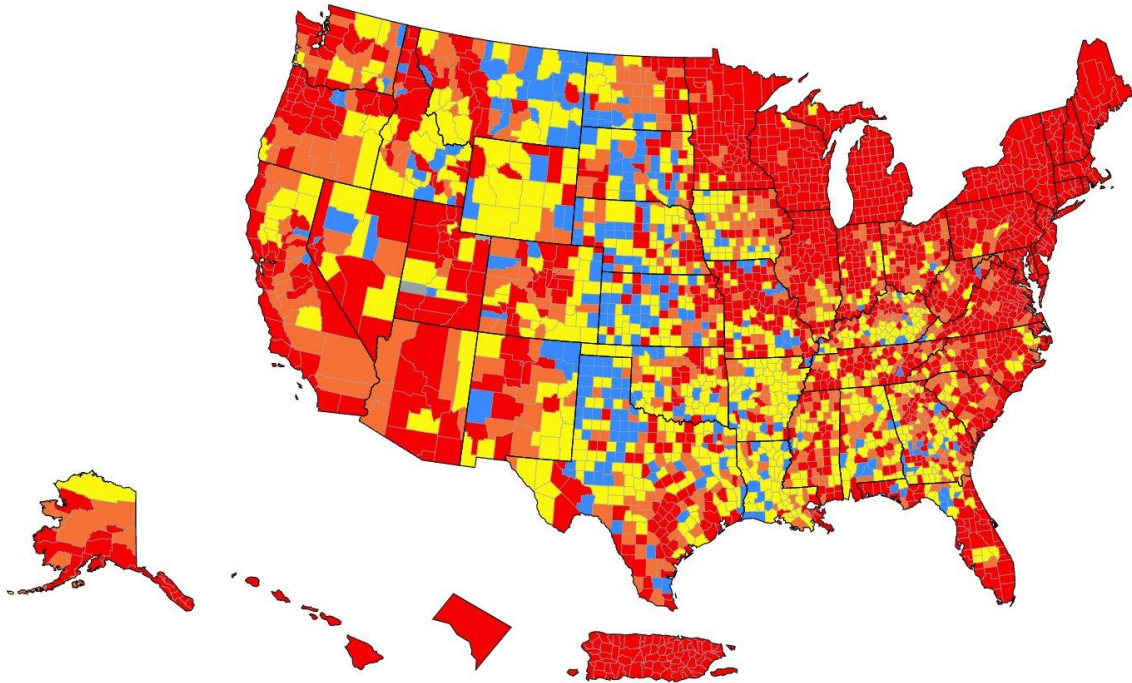
## ONE MILLION

A NATION'S IMMEASURABLE GRIEF



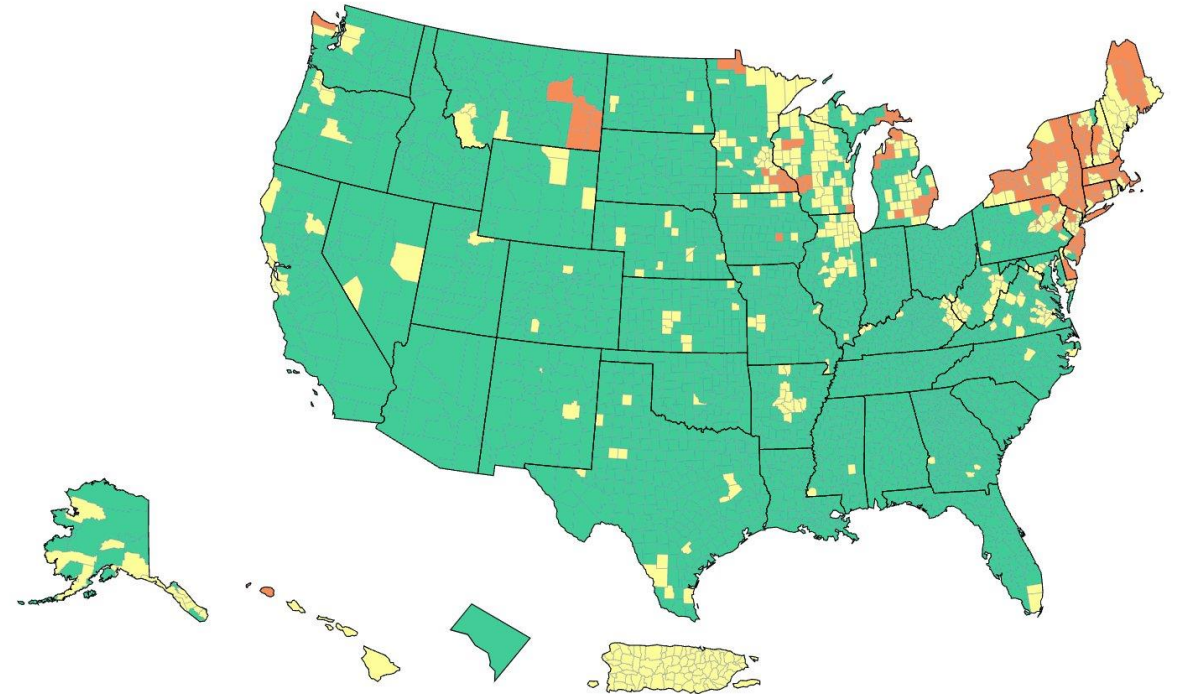


# A Tale of Two Maps



Community Transmission in US by County

	Total	Percent	% Change
High	1642	50.96%	12.76%
Substantial	541	16.79%	- 1.68%
Moderate	730	22.66%	- 7.32%
Low	307	9.53%	- 3.72%



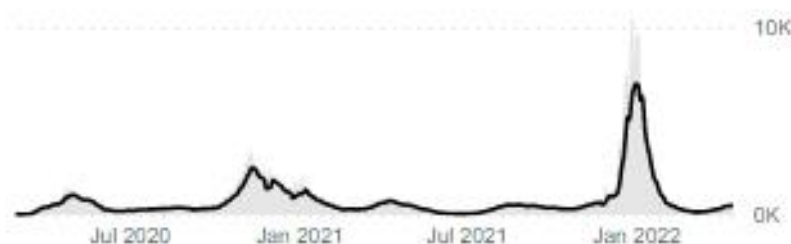
COVID-19 Community Levels in US by County

	Total	Percent	% Change
High	137	4.25%	1.8%
Medium	456	14.15%	4.28%
Low	2630	81.6%	- 6.09%



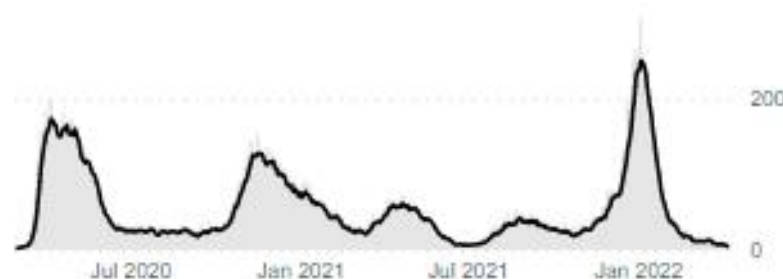
## CASES

**481** ▲ Current daily avg  
**430 (+12%)** Prior week  
**573,686** Cumulative  
**17.8** Daily rate per 100,000



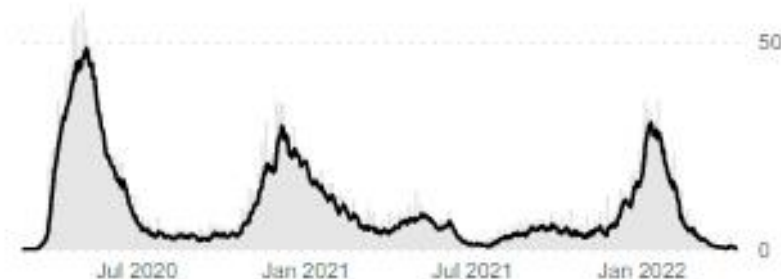
## HOSPITALIZATIONS

**4.29** ▼ Current daily avg  
**6.71 (-36%)** Prior week  
**41,763** Cumulative  
**0.2** Daily rate per 100,000



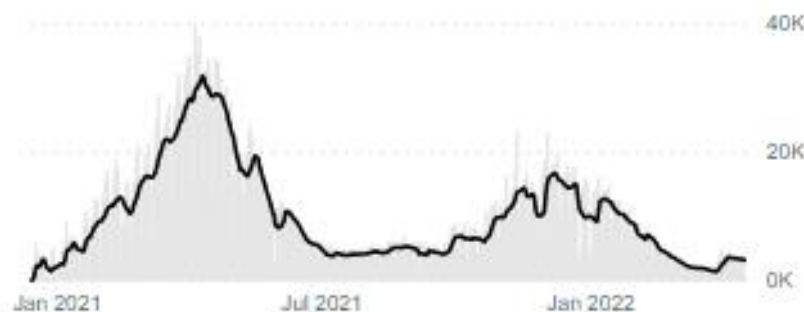
## DEATHS

**0.14** ▼ Current daily avg  
**0.71 (-80%)** Prior week  
**7,656** Cumulative  
**0.0** Daily rate per 100,000



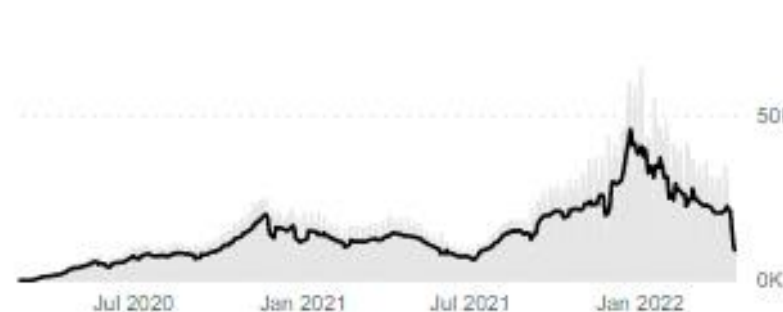
## VACCINATIONS ADMINISTERED

**3,122** ▼ Current daily avg  
**4,799,079** Cumulative  
**68.8%** Completed series  
**77.3%** At least one dose



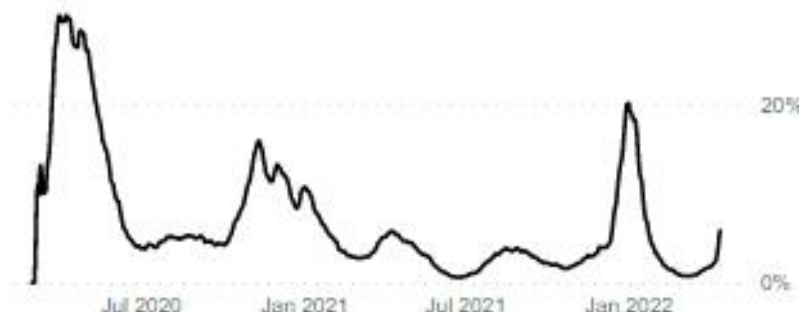
## TESTS PERFORMED

**9,189** ▼ Current daily avg  
**21,102 (-56%)** Prior week  
**10,997,275** Cumulative



## POSITIVITY RATE

**5.8%** ▲ Current daily avg  
**2.3%** Prior week

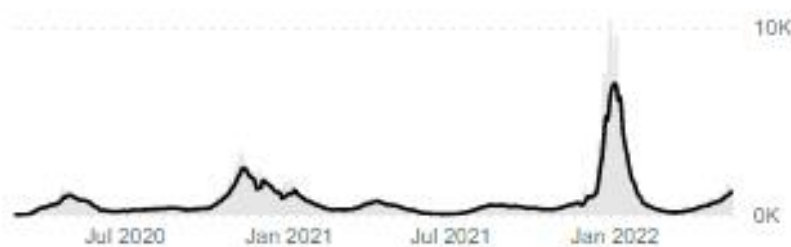


**SUMMARY** CASES CASES BY ZIP TESTS VACCINES VACCINES BY ZIP

[Learn how to use this dashboard.](#)

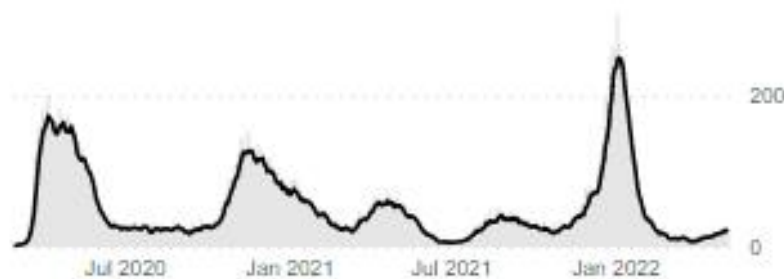
## CASES

**1,221** ▲ **961 (+27%)** **599,478** **45.1**  
Current daily avg Prior week Cumulative Daily rate per 100,000



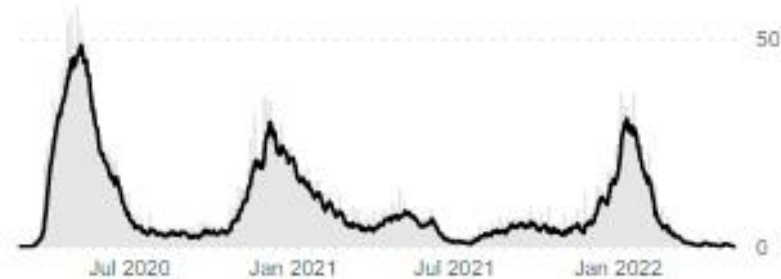
## HOSPITALIZATIONS

**21** ▲ **19 (+10%)** **42,394** **0.8**  
Current daily avg Prior week Cumulative Daily rate per 100,000



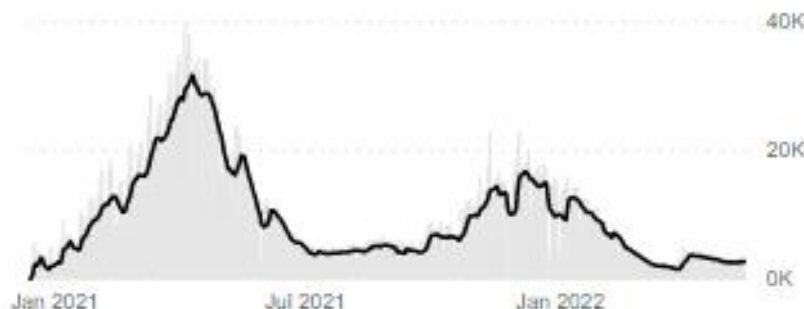
## DEATHS

**0.00** ▼ **0.43 (-100%)** **7,689** **0.0**  
Current daily avg Prior week Cumulative Daily rate per 100,000



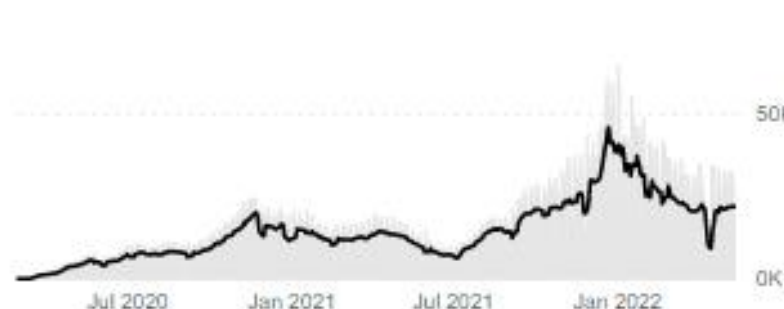
## VACCINATIONS ADMINISTERED

**2,663** ▲ **4,858,235** **68.8%** **76.2%**  
Current daily avg Cumulative Completed series At least one dose



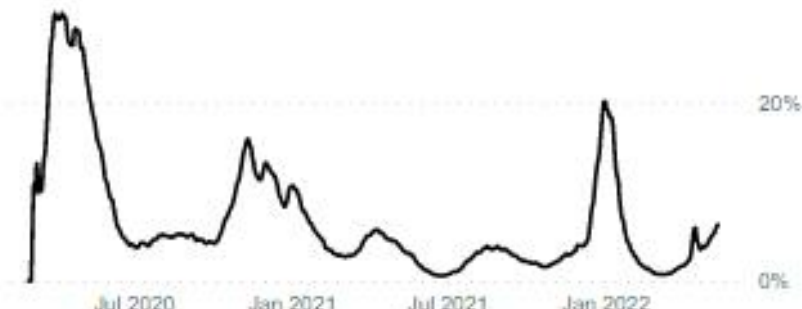
## TESTS PERFORMED

**21,706** ▲ **21,513 (+1%)** **11,610,195**  
Current daily avg Prior week Cumulative



## POSITIVITY RATE

**6.3%** ▲ **5.1%**  
Current daily avg Prior week





# CHICAGO'S COVID-19



## WEEKLY ROUND-UP

AS OF MAY 17



Chicago's current  
CDC COVID-19  
Community Level is

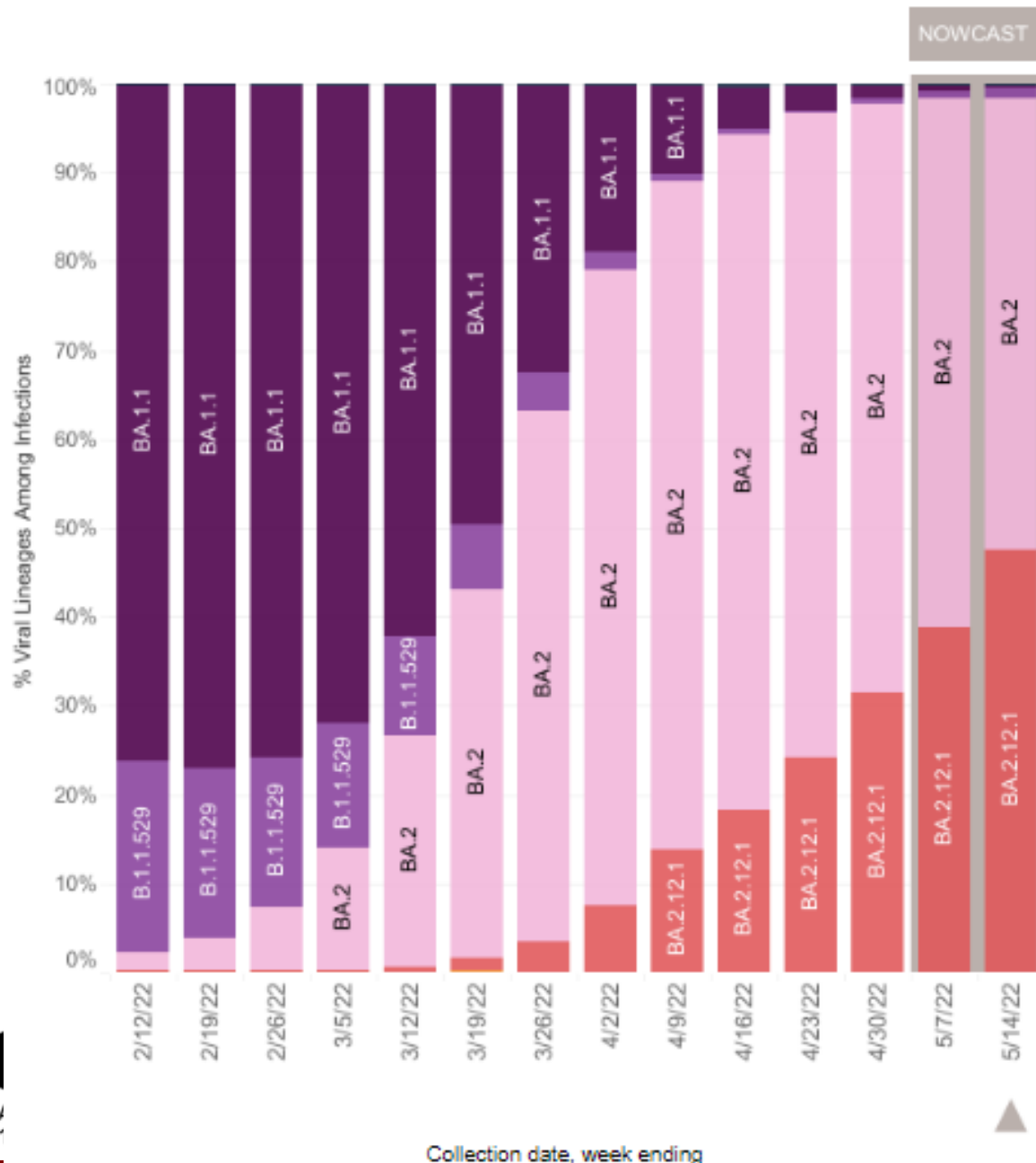
# MEDIUM

	<b><u>New Cases</u></b> (Per 100k people in last 7 days)  [Goal is <200]	<b><u>New COVID-19 admissions per 100k population</u></b> (7 day total)  [Goal is <10]	<b><u>Proportion of staffed inpatient beds occupied by COVID-19 patients</u></b> (7-day average)  [Goal is <10%]
<b>Chicago</b>	<b>303</b>	<b>4.9</b>	<b>3.9%</b>
<b>Cook County</b> (including City of Chicago)	<b>338</b>	<b>8</b>	<b>2.5%</b>

Chicago metrics are calculated based on Chicago-level data (data as of 5/16/2022). Cook County metrics are calculated by the CDC and posted on the CDC Community Levels website (data as of 5/12/2022).



## United States: 5/8/2022 – 5/14/2022 NOWCAST



USA				
WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.2	VOC	50.9%	44.9-56.9%
	BA.2.12.1	VOC	47.5%	41.5-53.5%
	B.1.1.529	VOC	1.2%	0.6-2.2%
	BA.1.1	VOC	0.3%	0.2-0.4%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.2%	0.1-0.3%

\* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.

\*\* These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

# AY.1-AY.133 and their sublineages are aggregated with B.1.617.2. BA.1, BA.3, BA.4, BA.5 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. For regional data, BA.1.1 and its sublineages are also aggregated with B.1.1.529, as they currently cannot be reliably called in each region. Except BA.2.12.1 and its sublineages, BA.2 sublineages are aggregated with BA.2.

# New Omicron Subvariants

- BA.2.12.1 variant now account for 48% new cases in the US
- Out-competing BA.2 with its 25% higher transmission rate
- Distinct from Omicron BA.1 and BA.2, pose a further challenge to immune system recognition, minimal cross-immunity derived from BA.1
- BA.4 and BA.5, have multiple different mutations, new wave of cases in South Africa and Portugal
- reduction on vaccine/booster protection against hospitalization and death



The New York Times  
@nytimes

The coronavirus has become more adept at reinfecting people as Omicron and its many descendants seem to have evolved to partially dodge immunity. Waves of infections two, maybe three times a year may be the future of Covid-19, some scientists now fear.



nytimes.com

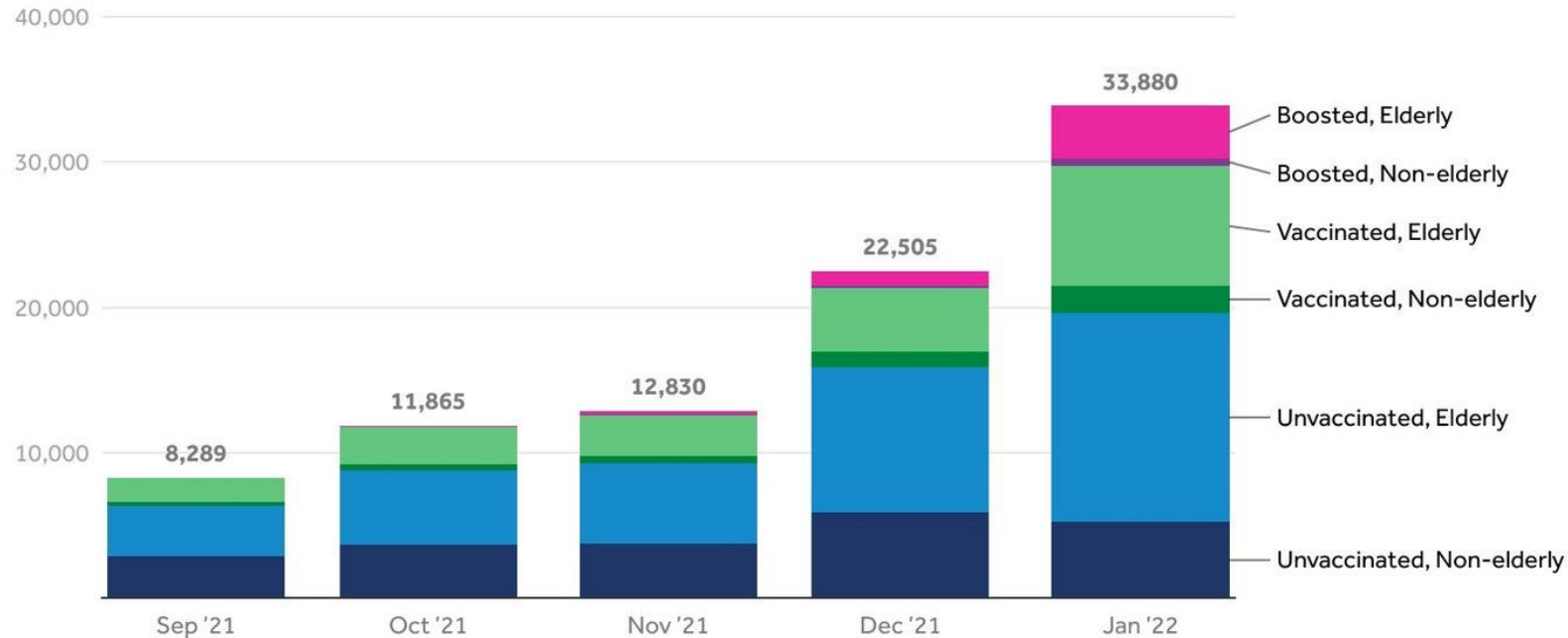
How Often Can You Be Infected With the Coronavirus?

The spread of the Omicron variant has given scientists an unsettling answer: repeatedly, sometimes within months.

11:00 AM · May 16, 2022 · SocialFlow

# Zero COVID → Zero COVID Deaths

Number of adult COVID-19 deaths by age group and vaccination status, 23 jurisdictions in the U.S., September 2021 to January 2022



Note: Elderly include those ages 65 and older; non-elderly adults include those ages 18-64. Partially vaccinated COVID-19 deaths are excluded in this CDC data source.

Source: KFF analysis of CDC data

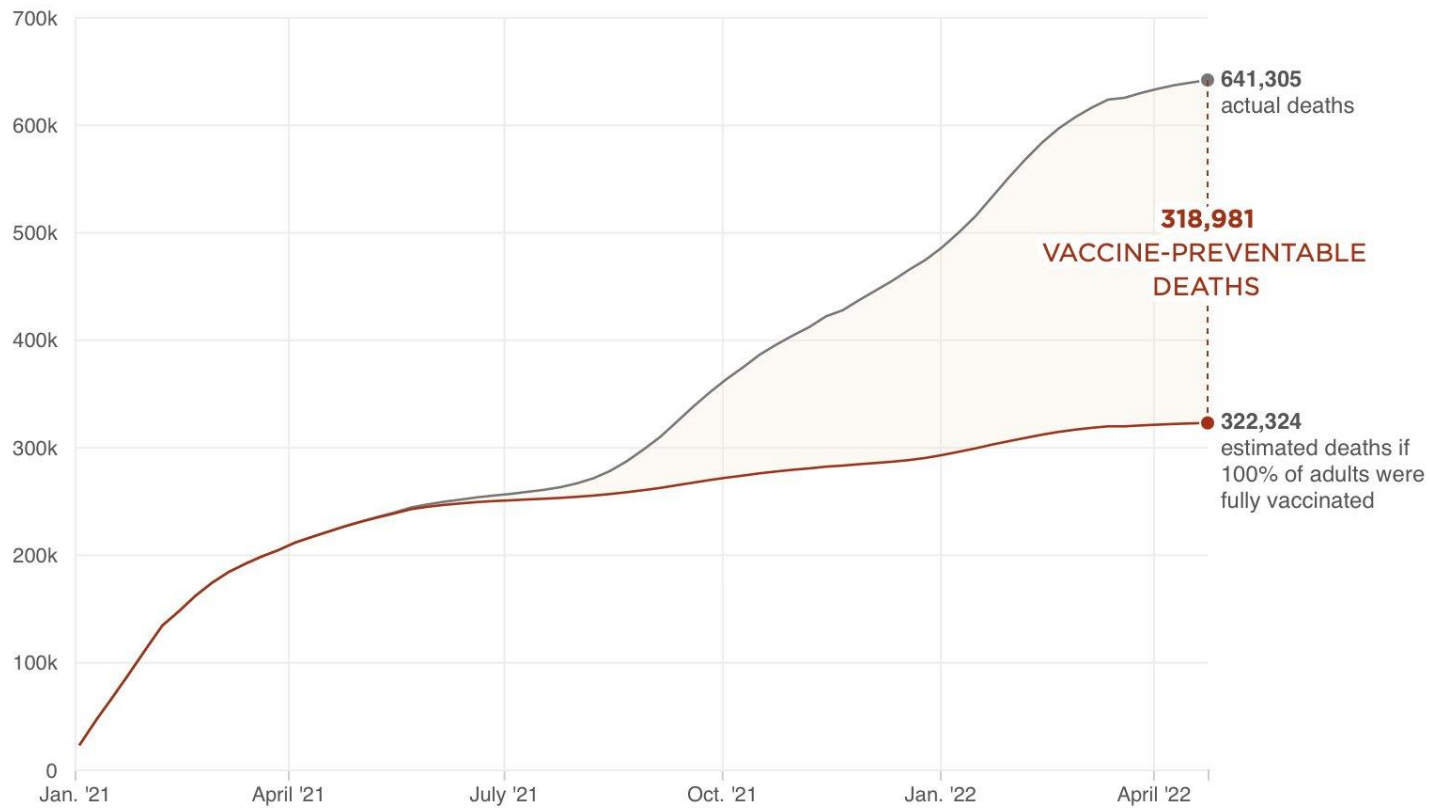
Peterson-KFF  
**Health System Tracker**



# Zero COVID → Zero COVID Deaths

Nearly 319,000 COVID-19 deaths could have been averted if all adults had gotten vaccinated

Cumulative deaths among adults age 18 and older, from January 1, 2021 to April 30, 2022




Source: Brown School of Public Health and Microsoft AI for Health, May 2022

Credit: Koko Nakajima/NPR

# Zero COVID → Zero COVID Deaths

- Current COVID deaths still >10-fold in excess of seasonal flu (175,000 vs 30,000 in 2022)
- Only ~30% of Americans have received booster, >60% in comparable HICs (rank #60)
- Needs to tamp down transmission with NPIs we know that still work
- Maximize access to antivirals like Paxlovid




**BOOSTER REMINDER**

All Chicagoans age 12 and older should get a COVID-19 booster dose when they are eligible, especially seniors and people with underlying medical conditions who are at higher risk of severe complications.

Everyone age 12 or over should have a vaccine booster at least **5 MONTHS** after completing their initial vaccine series.

Individuals ages 12-17 should receive a Pfizer booster. For individuals 18+, Pfizer and Moderna are preferred over J&J for booster doses.

While 76% of Chicagoans age 12 and up have completed their primary COVID-19 vaccine series, **just 41% have also had the recommended vaccine booster.**

 **CHICAGO**  
MAYOR LOUIE LIGHTFOOT

Paxlovid



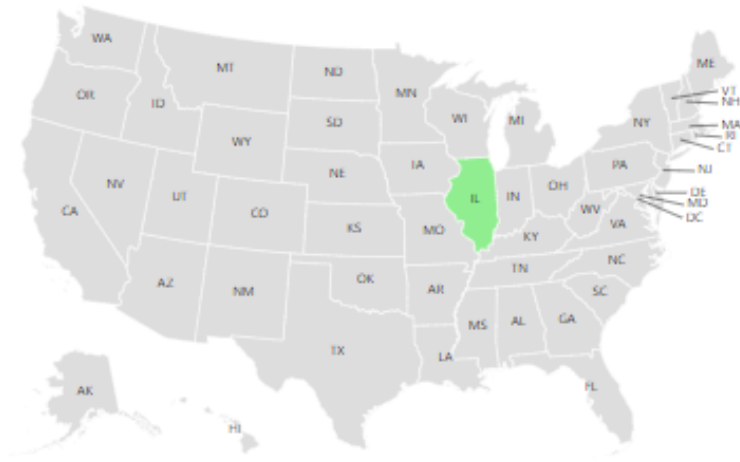
providers in: Illinois (IL)



< county >

# Antiviral Use in IL

- Extraordinary increase in antiviral prescriptions
- US is dispensing more than 20K courses/day
- Still inequities between urban and rural areas
- Gov't continues to expand T2T model



[Data harvested from [healthdata.gov](https://healthdata.gov), which last updated: Tue, 5/17, 5:27 AM CDT. Support site: [donate a coffee.](#)]

## Illinois (IL) Health

### Department Info

- @IDPH
- [dph.illinois.gov](https://dph.illinois.gov)
- [IL Covid Site](#)
- Search for "paxlovid" term: [results](#)

### IL State

- Providers: 1,196
- Available Doses: 30,521
- per 100k: 241

## Patient Doses Given (IL)

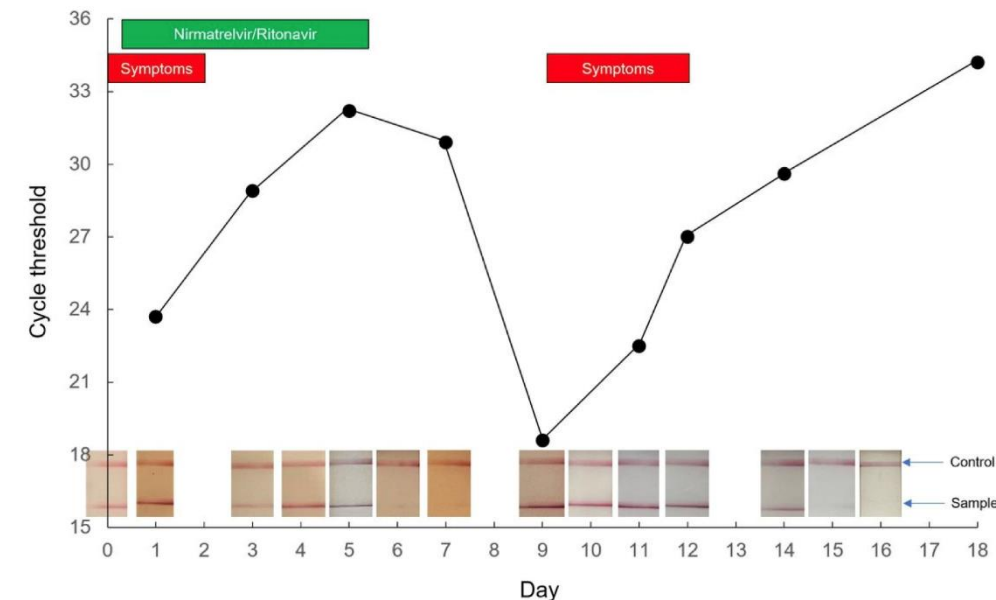
- Total: ~21,391
- per 100k: 169
- Weekly:





# Paxlovid Rebound Phenomenon

- We are clearly observing relapses after 5-day courses of nirmatrelvir/ritonavir (Paxlovid)
- Typically rebound symptoms are milder but some anecdotally have been severe
- 2% in Pfizer trial experienced rebound, likely more common in real world
- Rebound is associated with new viral peak (~ day 9)
- Lots of unanswered questions:
  - Lengthen duration for high risk patients?
  - Change in dose?
  - Repeat testing after course?
  - Update isolation guidance?



# COVID Vaccine Overview

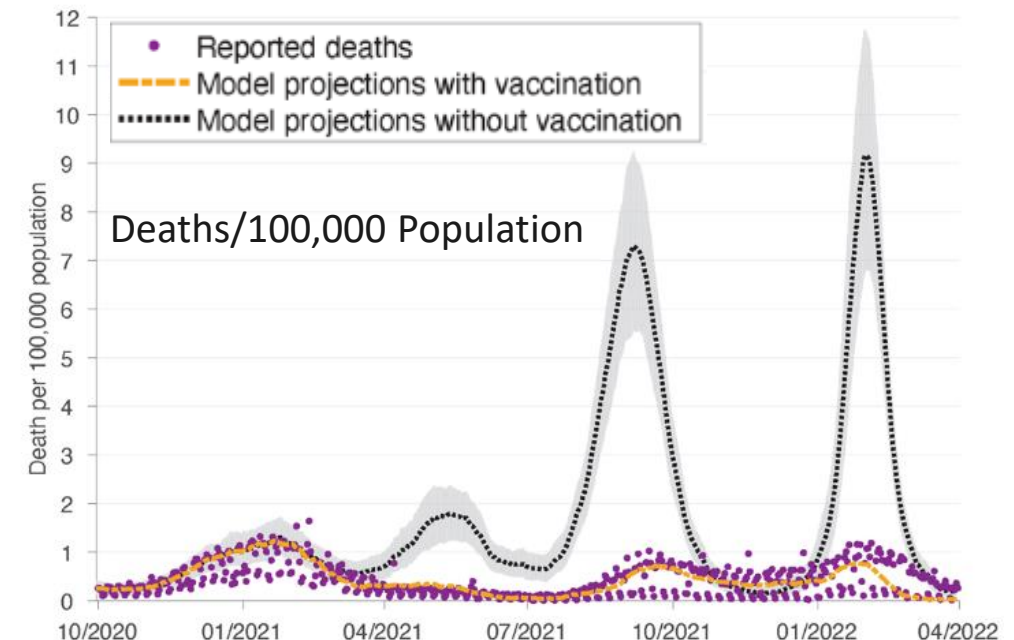
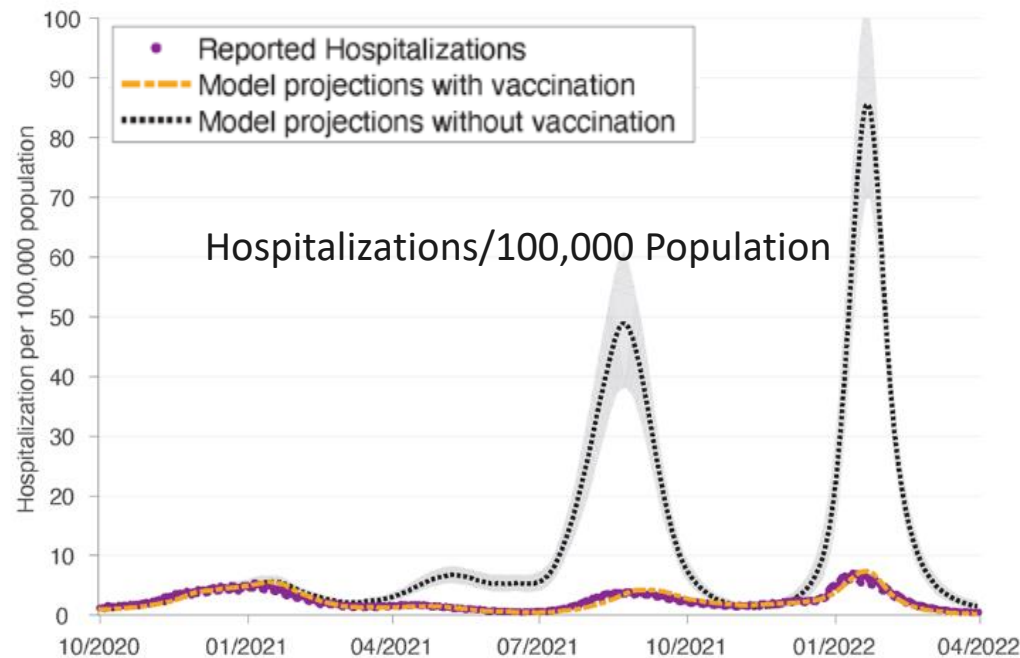


# Vaccination- Is there a need?



# Estimated Averted COVID-19 Deaths, Hospitalizations, Infections, and Health Care Costs by U.S. Vaccination: 12/12/20 – 3/31/22

Deaths	2,265,222	2,051,041 to 2,467,683
Hospitalizations	17,003,960	15,680,556 to 18,250,413
Infections	66,159,093	58,774,953 to 73,787,291
Health care costs	\$899.4 billion	\$825.3 billion to \$978.5 billion



Courtesy D Johnson

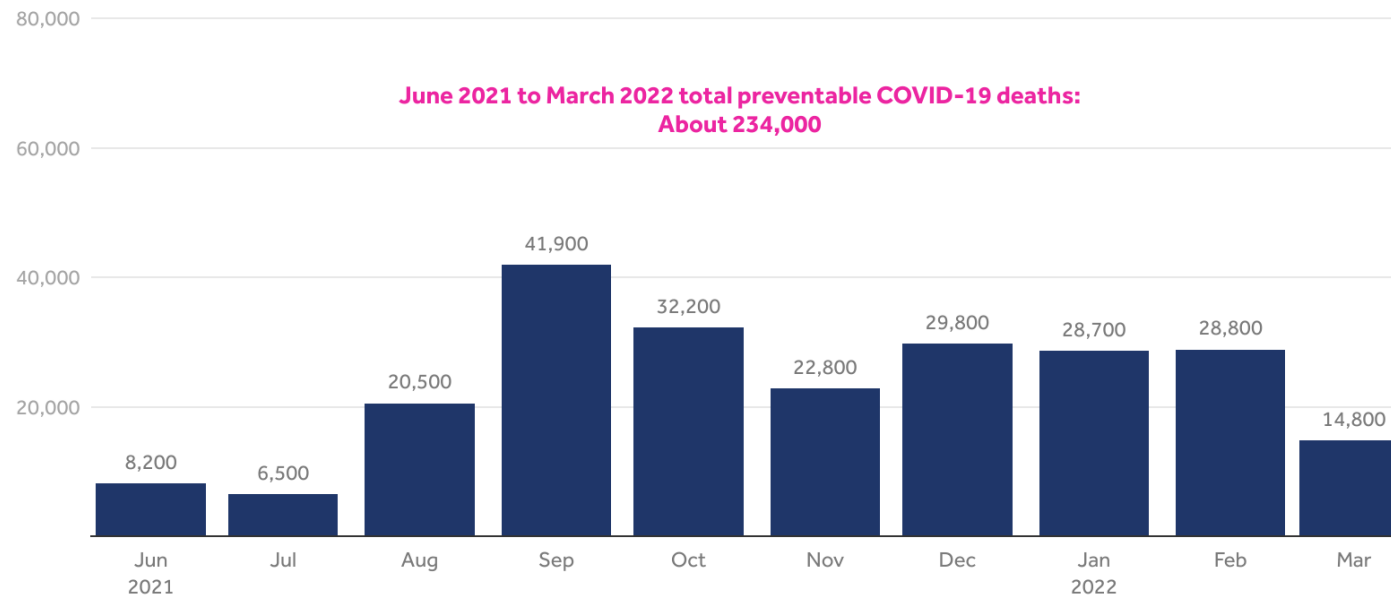


Commonwealth Fund. [https://www.commonwealthfund.org/blog/2022/impact-us-covid-19-vaccination-efforts-march-update?utm\\_source=alert&utm\\_medium=email&utm\\_campaign=Improving+Health+Care+Costs](https://www.commonwealthfund.org/blog/2022/impact-us-covid-19-vaccination-efforts-march-update?utm_source=alert&utm_medium=email&utm_campaign=Improving+Health+Care+Costs)



# Preventable Covid deaths since June 2021

COVID-19 deaths among unvaccinated adults that likely could have been prevented with primary series vaccinations, June 2021-March 2022

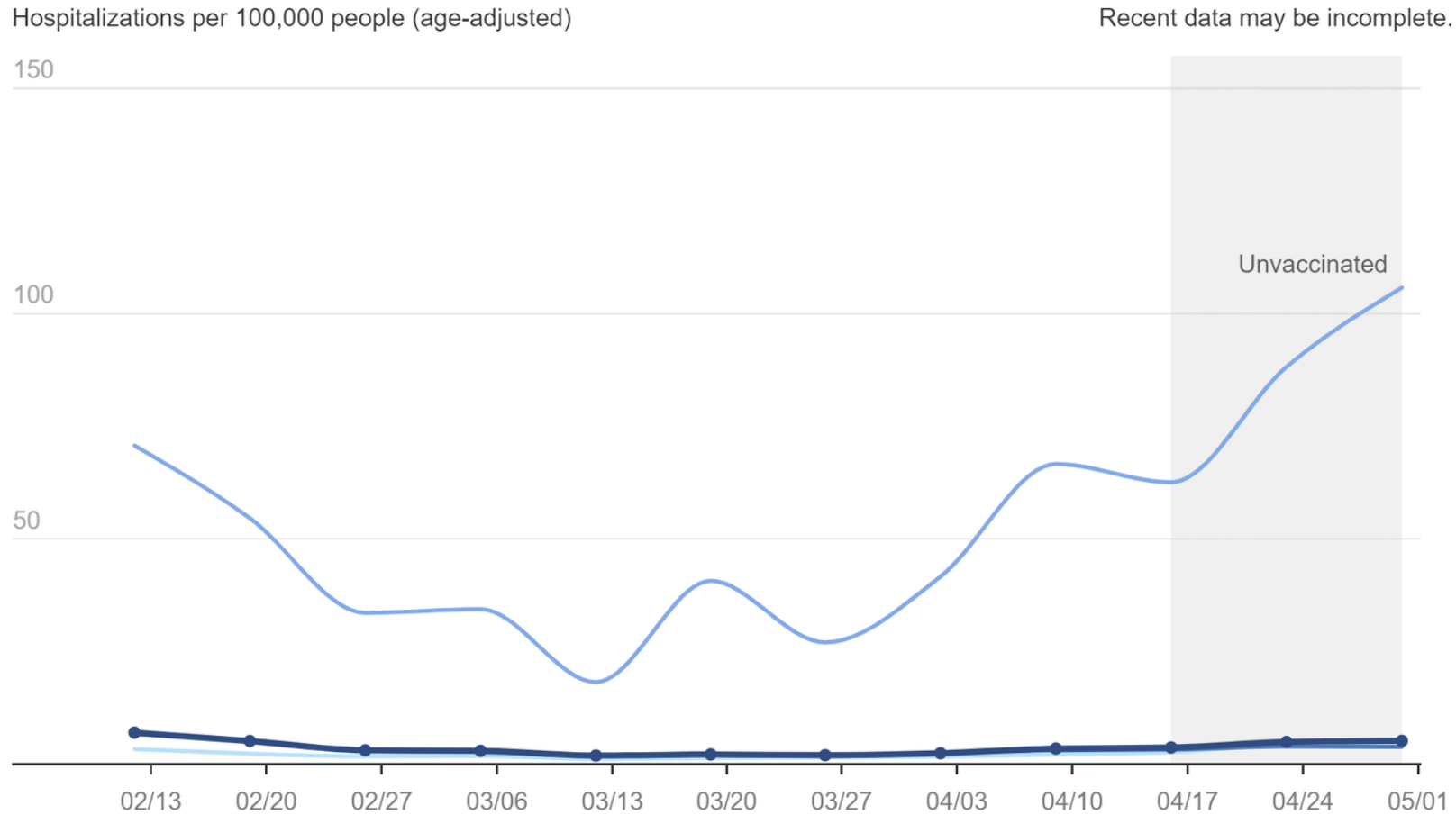


Note: See brief for detailed assumptions and methods.

Source: KFF analysis of CDC and KFF COVID-19 tracker data

Peterson-KFF  
**Health System Tracker**

# New York City Health Department



# What the evidence says about the risks

## Benefits

- Prevention of COVID-19 cases
- Prevention of severe illness, hospitalization, and death
- Protection against long-COVID and other complications (MIS-C)
- Greater confidence in safer in-person schooling and social interactions
- Reduction in transmission time



## Risks

- Short term reactogenicity
- Myocarditis and other rare events post-vaccination?

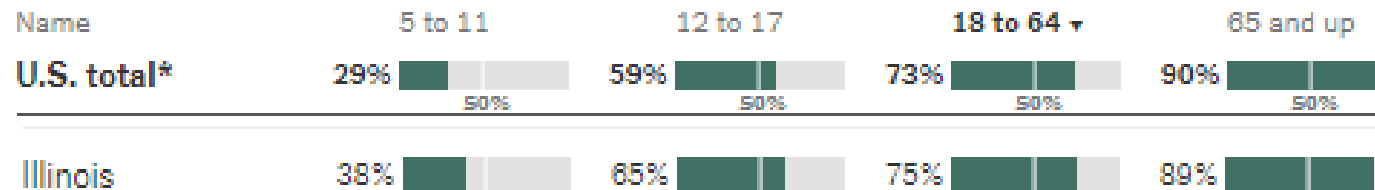


# Vaccination Status: Illinois

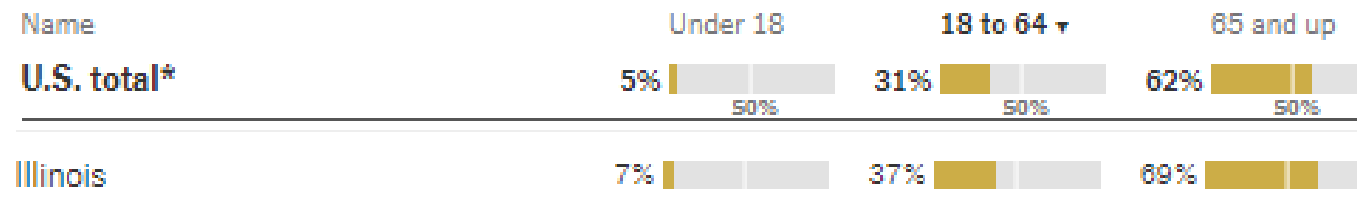
## 5/9/2022

### Vaccinations by age group

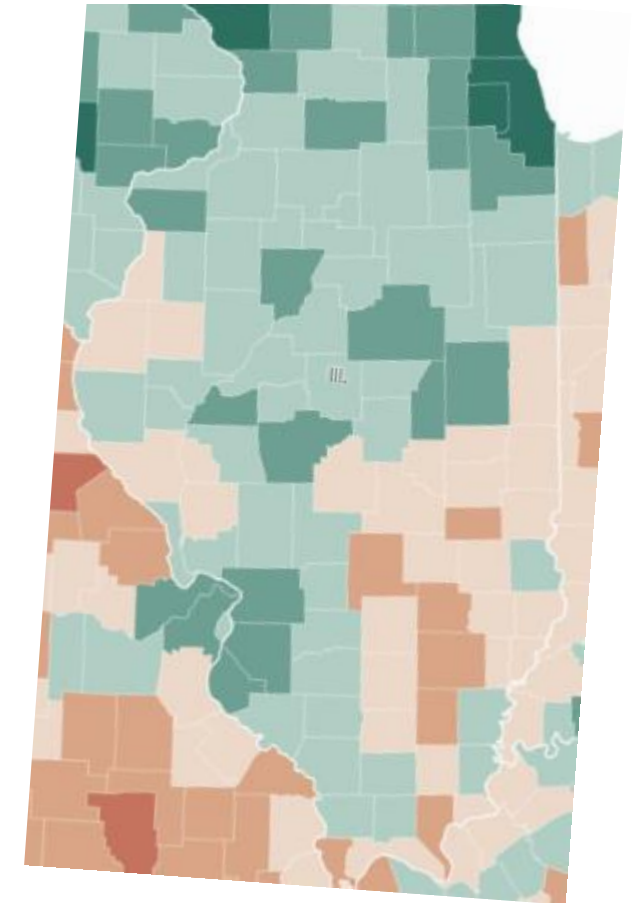
Percentage of fully-vaccinated residents



Percentage of residents with a booster



Pct. of residents who are fully vaccinated



# U.S. COVID-19 Vaccines



Courtesy  
D Johnson

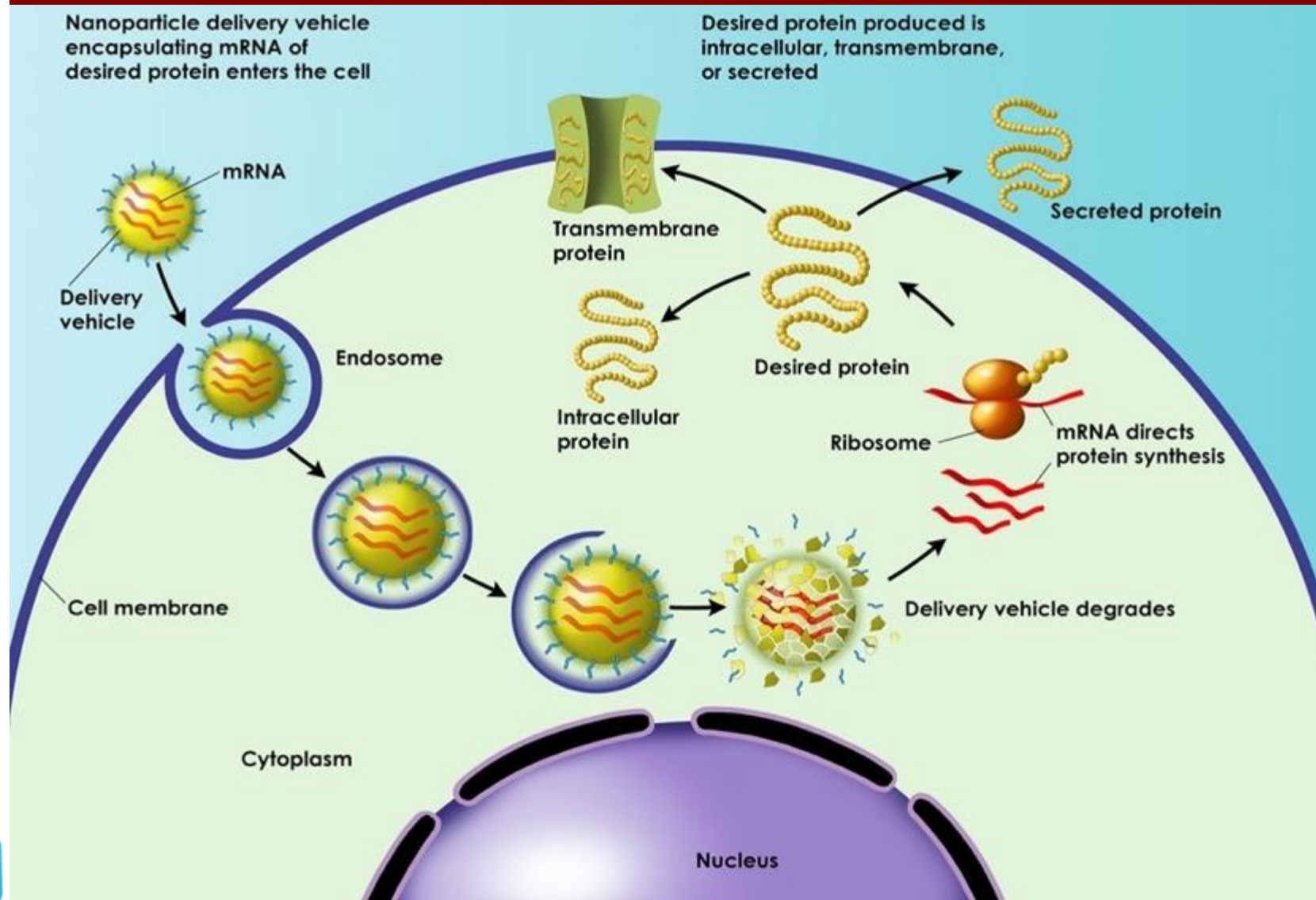


Courtesy D Johnson

# Vaccine Types

- Pfizer and Moderna are mRNA vaccines
  - There is no virus in the vaccine
- Janssen (J&J) vaccine is an attenuated human adenovirus vaccine
  - There is no coronavirus in the vaccine
- mRNA COVID-19 vaccines are preferred over the Janssen COVID-19 Vaccine for all vaccine-eligible people
  - Blood clot seen with the Janseen vaccine in 1 in 20,000 doses (thrombosis with thrombocytopenia syndrome, TTS) in young adults, especially in women
    - 18 million people, 60 cases of TTS were reported and nine people died

# How Do mRNA COVID Vaccines Work?



Courtesy D Johnson





# Primary Series & Additional Doses as of 3.29.22

Vaccine Manufacturer	Age Indication, years	Dose	Injection Volume	Number of doses in primary series (interval between doses)	Additional primary dose in immunocompromised persons (interval since second dose)
Pfizer-BioNTech	5 to 11	10 µg	.2 mL	2 (3 weeks)	≥4 weeks
Pfizer-BioNTech	≥12	30 µg	.3 mL	2 (3-8 weeks)*	≥4 weeks
Pfizer-BioNTech	≥12	30 µg	.3 mL	2 (3-8 weeks)*	≥4 weeks
Moderna (red cap)	≥18	100 µg	.5 mL	2 (4-8 weeks)*	≥4 weeks
Janssen	≥18	5 X10 <sup>10</sup> viral particles	.5 mL	1 (Not applicable)	≥4 weeks– Pfizer-BioNTech or Moderna COVID-19 Vaccine should be used in most situations**

\*An 8-week interval may be optimal for some people ages 12 years and older, especially for males ages 12 to 39 years. A shorter interval (3 weeks for Pfizer-BioNTech; 4 weeks for Moderna) between the first and second doses remains the recommended interval for:

- people who are moderately or severely immunocompromised
- adults ages 65 years and older
- others who need rapid protection due to increased concern about community transmission or risk of severe disease

\*\* Although mRNA vaccines are preferred, J&J/Janssen COVID-19 vaccine [may be considered in some situations](https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#considerations-covid19-vax-booster)

# Boosters as of

3.29.22 Vaccine Manufacturer	Age Indication, years	Dose	Injection Volume	Interval between last primary dose to first booster dose	Interval between last primary dose to first booster dose in immunocompromised persons	Interval between first and second booster dose
Pfizer-BioNTech	5 to 11	Not recommended				
Pfizer-BioNTech	≥12	30 µg	.3 mL	≥5 months	≥3 months	≥4 months for immunocompromised persons only OR anyone ≥50 years old
Pfizer-BioNTech	≥12	30 µg	.3 mL	≥5 months	≥3 months	≥4 months for immunocompromised persons only OR anyone ≥50 years old
Moderna (red cap)	≥18	50 µg	.25 mL	≥5 months	≥3 months	≥4 months for immunocompromised persons only OR anyone ≥50 years old
Moderna (blue cap – for boosters only)	≥18	50 µg	.5mL	≥5 months	≥3 months	≥4 months for immunocompromised persons only OR anyone ≥50 years old
Janssen	≥18	5 X10 <sup>10</sup> viral particles	.5 mL	≥2 months – Pfizer-BioNTech or Moderna COVID-19 vaccine should be used in most situations*	≥2 months – Pfizer-BioNTech or Moderna COVID-19 vaccine should be used in most situations*	≥4 months for people who received Janssen for their first shot and booster – Pfizer-BioNTech or Moderna COVID-19 vaccine should be used in most situations*

\*Although mRNA vaccines are preferred, J&J/Janssen COVID-19 vaccine [may be considered in some situations](#).

# 5/5/22 Update for Janssen

- On 5/5, the [FDA limited the authorized use](#) of the Janssen COVID-19 vaccine to:
  - individuals 18 and older for whom other authorized or approved COVID-19 vaccines are not accessible or clinically appropriate
  - individuals 18 and older who elect to receive the Janssen COVID-19 Vaccine because they would otherwise not receive a COVID-19 vaccine
- Use was limited due to concerns of the risk of thrombosis with thrombocytopenia syndrome (TTS) following receiving the Janssen vaccine

The risk of thromboses due to COVID-19 infection is much greater than the risk following vaccination!

## ARE YOU UP TO DATE WITH YOUR COVID-19 VACCINE?



### Guide for persons 12-49 years old\*

Are you moderately or severely immunocompromised?

NO

YES

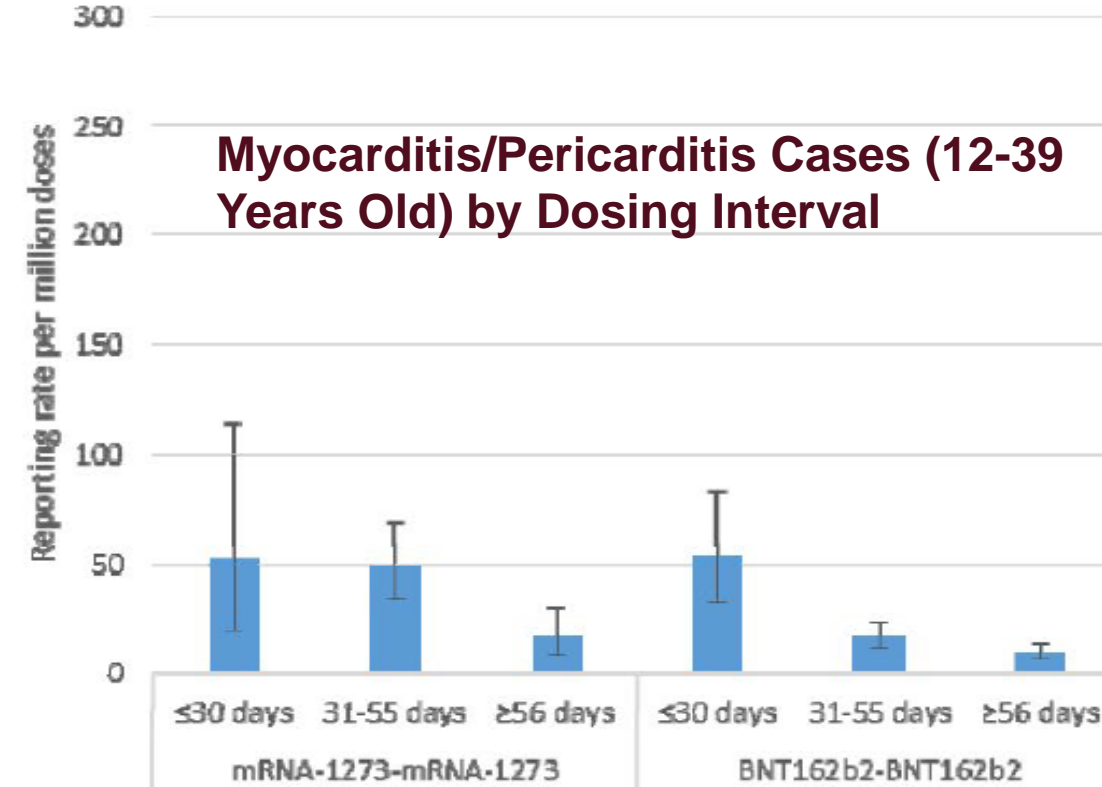
Up to date after:  
**3 doses**

- 2nd dose given 3-8 weeks after 1st (Pfizer) or 4-8 weeks (Moderna)\*
- 3rd dose (booster) given at least 5 months after 2nd

Up to date after:  
**5 doses**

- 2nd dose given 3 weeks after 1st (Pfizer) or 4 weeks (Moderna)\*
- 3rd dose given at least 4 weeks after 2nd dose
- 4th dose (booster) given at least 3 months after 3rd
- 5th dose (booster) given at least 4 months after 4th

\*AND RECEIVED PFIZER (APPROVED FOR 12+) OR MODERNA (APPROVED FOR 18+)



2 Moderna

2 Pfizer-BioNTech

<https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-02-04/09-COVID-Tunis-508.pdf>



# ARE YOU UP TO DATE WITH YOUR COVID-19 VACCINE?



**Guide for persons 5 to 11 years old\***

**Are you moderately or severely  
immunocompromised?**

**NO**



Up to date after:  
**2 doses**

- 2nd dose given 3 weeks after 1st

**YES**



Up to date after:  
**3 doses**

- 2nd dose given 3 weeks after 1st
- 3rd dose given at least 4 weeks after 2nd

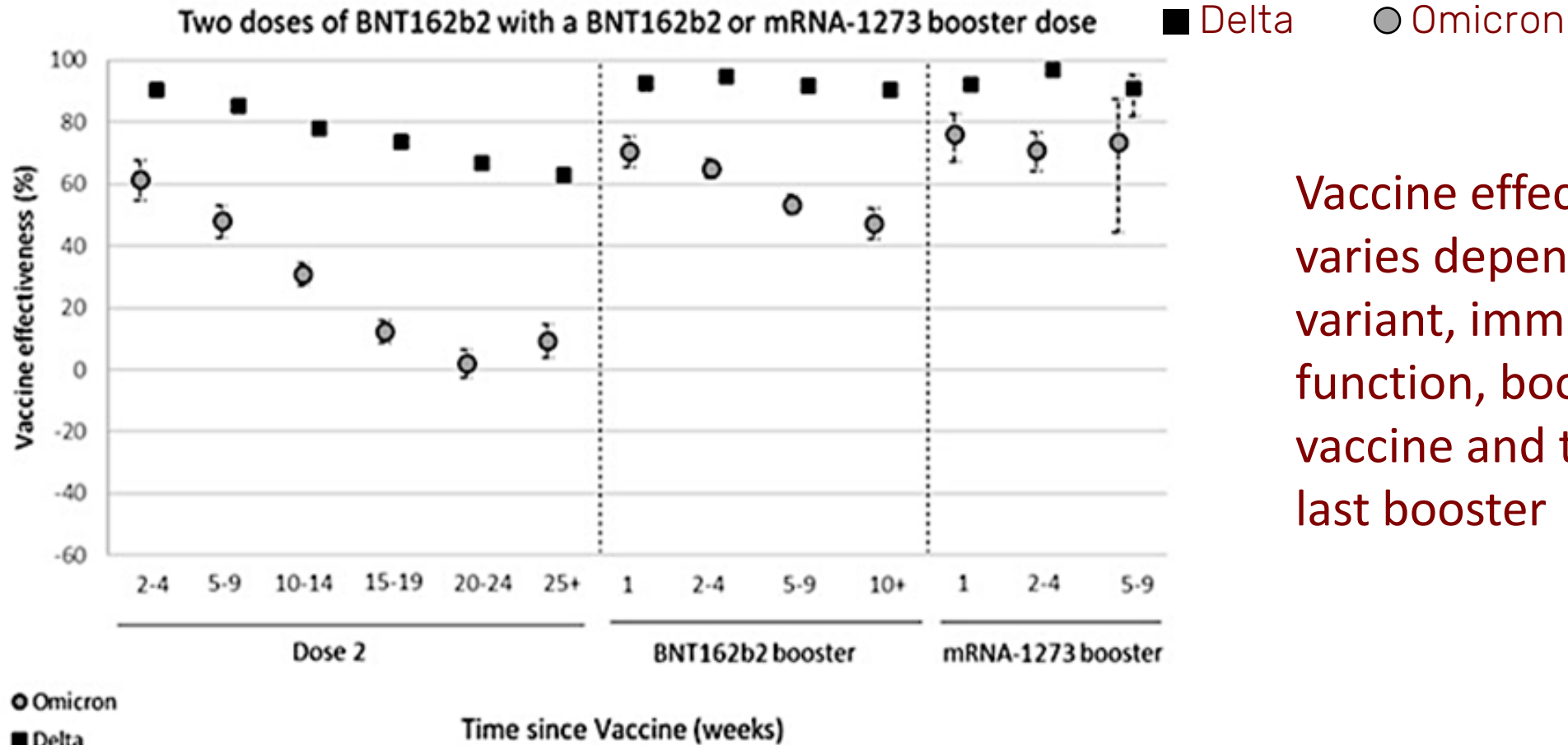
**\*ONLY PFIZER IS APPROVED FOR THIS AGE GROUP**

# Who is Immunocompromised?

- BMI  $\geq 85^{\text{th}}$  percentile for age and gender
- Immunosuppressive disease or receipt of immunosuppressive therapies
- Neurodevelopmental or psychiatric disorders (i.e., cerebral palsy, trisomy 21, severe mood disorder, substance use disorder)
- Technological dependence that is not related to COVID-19 (i.e., tracheostomy, positive pressure ventilation, gastrostomy)
- Sickle cell disease
- Congenital or acquired functional heart disease
- Chronic lung disease that requires daily medication for control
- Diabetes
- Chronic kidney disease
- Chronic liver disease (i.e., cirrhosis, autoimmune hepatitis)
- Pregnancy

# How Well Do COVID Vaccines Work?

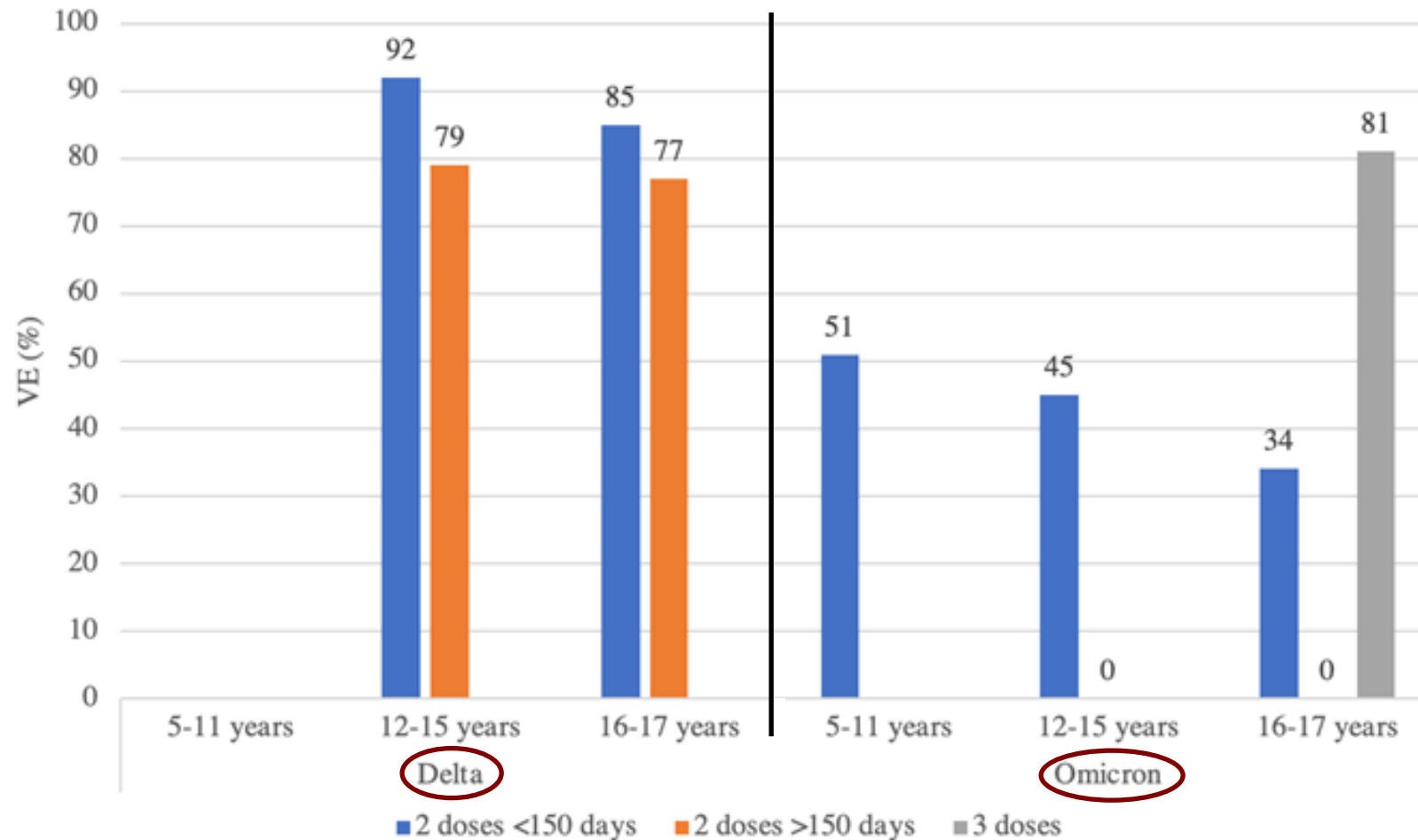
## Vaccine Efficacy as Measured by Infection Risk



Vaccine effectiveness varies depending on variant, immune function, boosting vaccine and time from last booster

Courtesy D Johnson

# Vaccine Effectiveness Against ER and Urgent Care Visits for Kids in US



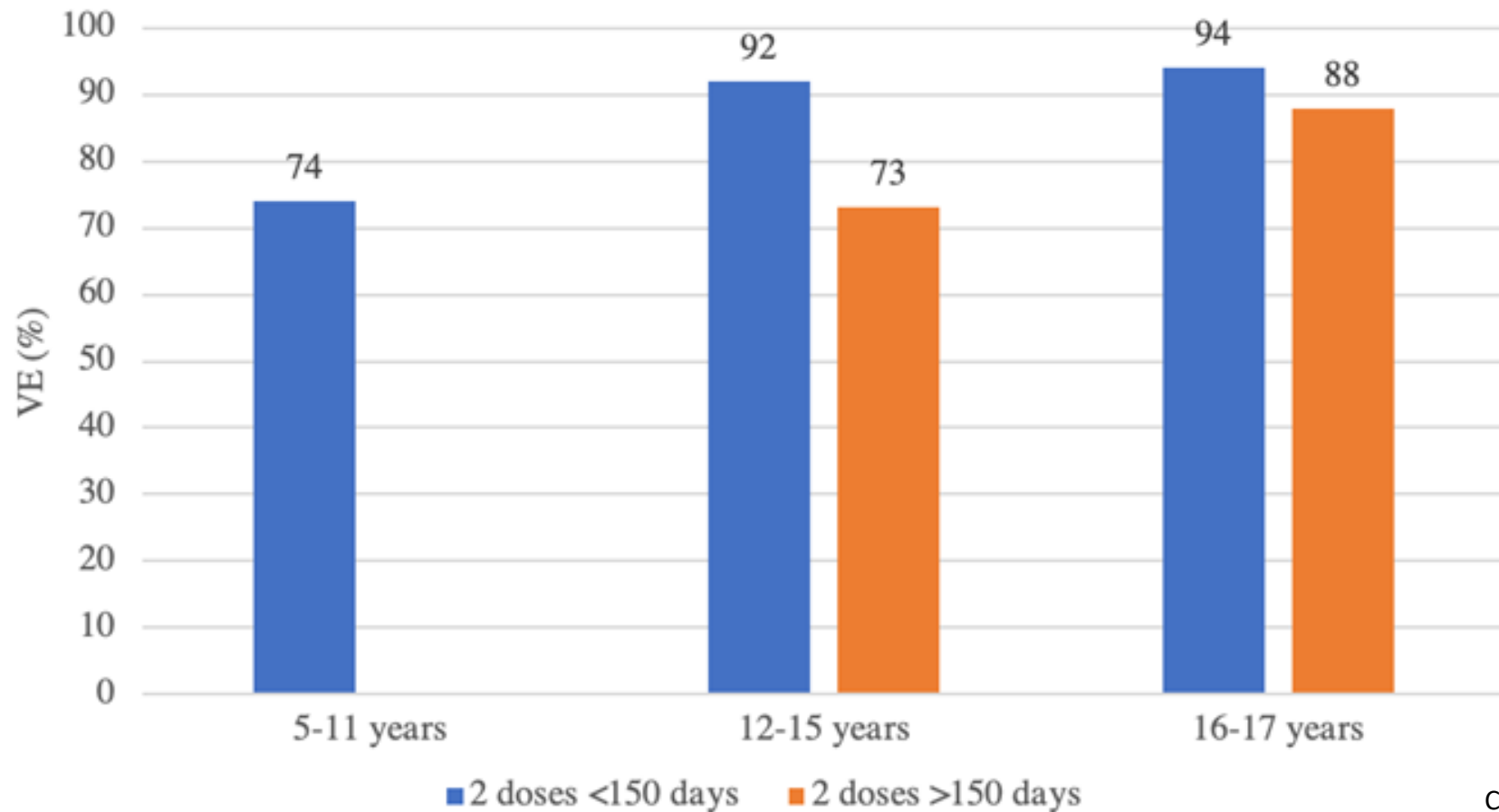
Courtesy D Johnson



- MMWR. <https://www.cdc.gov/mmwr/volumes/71/wr/mm7109e3.htm>
- Katelyn Jetelina/YLE. <https://yourlocalepidemiologist.substack.com/p/pediatric-vaccine-effectiveness-new?s=r>



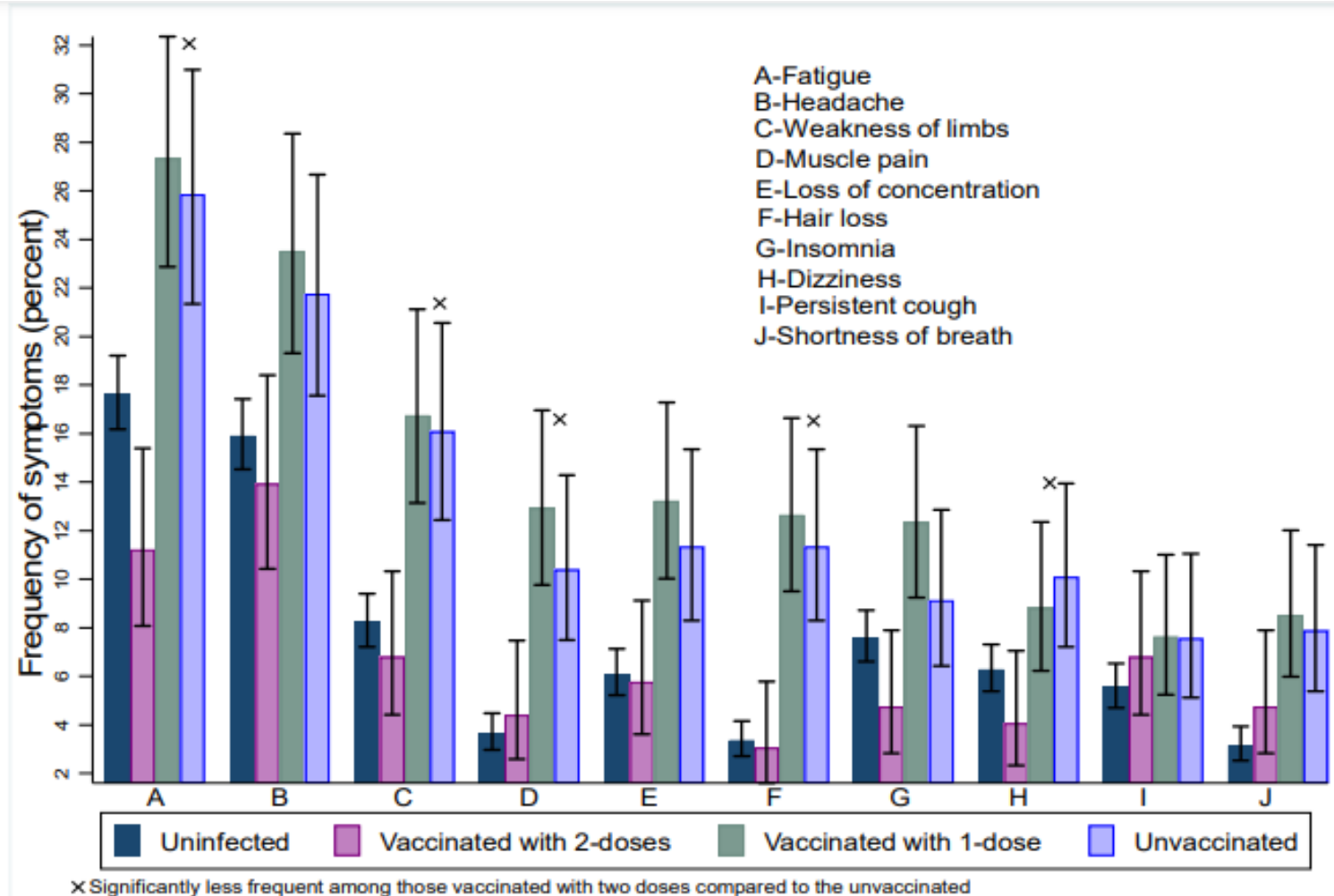
# Vaccine Effectiveness Against Hospitalization for Kids in US (Omicron)



Courtesy D Johnson

- MMWR. <https://www.cdc.gov/mmwr/volumes/71/wr/mm7109e3.htm>
- Katelyn Jetelina/YLE. <https://yourlocalepidemiologist.substack.com/p/pediatric-vaccine-effectiveness-new?s=r>

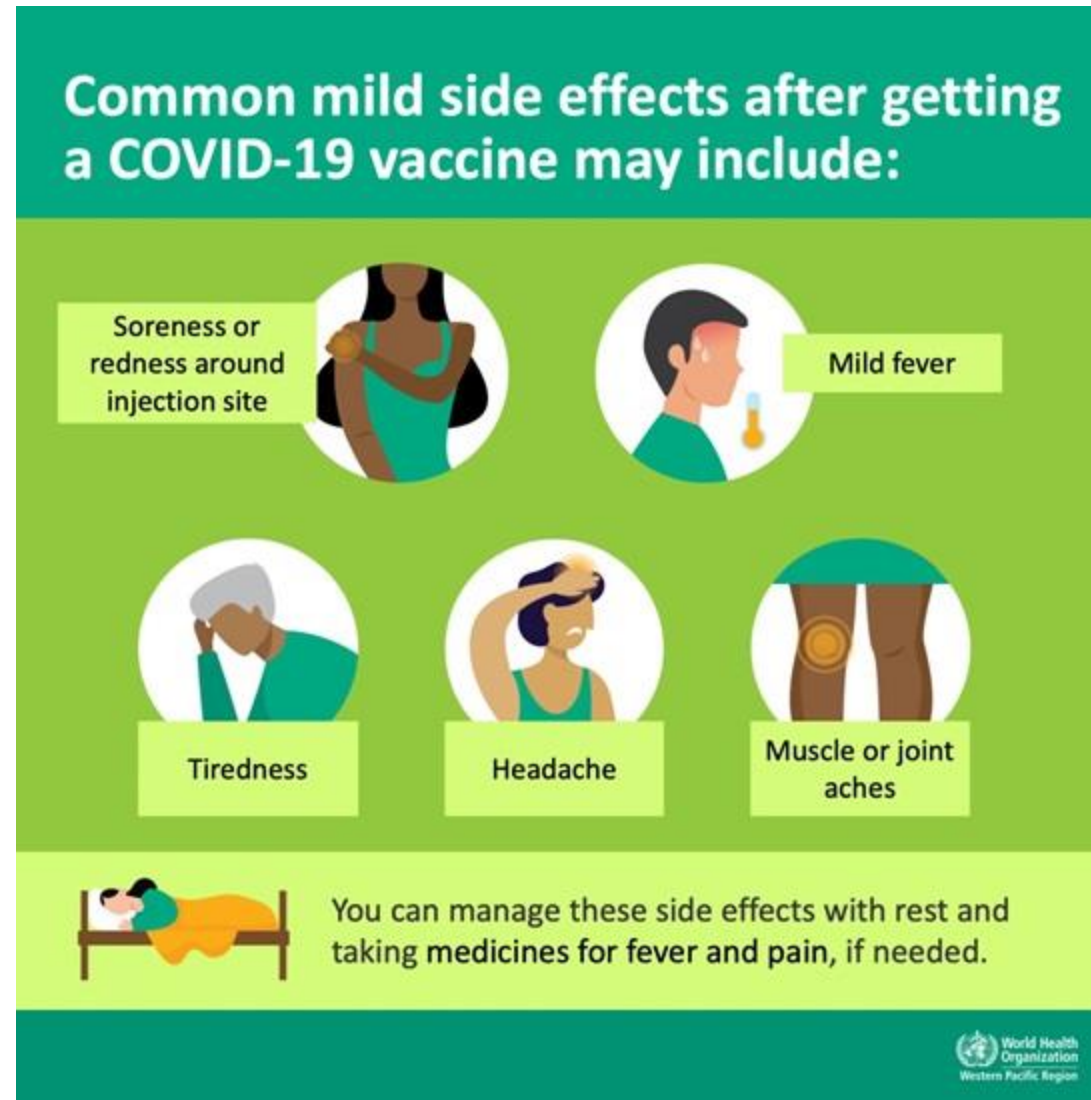
# Frequency of Most Reported Long COVID Symptoms among Controls, Vaccinated and Unvaccinated: Israel, Adults



- March 2020-November 2021
  - Prior to Omicron
- Online questionnaire
- Compared vaccinated individuals with those unvaccinated and those uninfected for self-reported symptoms post-acute infection
- 951 infected and 2437 uninfected individuals
  - Of the infected, 637(67%) were vaccinated
- In addition to reducing the risk of acute illness, COVID-19 vaccination may have a protective effect against long COVID

# Common Vaccine Side Effects

Symptoms  
last for less  
than 48-72  
hours



Courtesy D Johnson

# Pregnancy and Breastfeeding

Protective of mother and baby



<https://www.businessinsider.com/experts-say-all-pregnant-breastfeeding-women-should-get-vaccine-2021-4>



<https://healthblog.uofmhealth.org/womens-health/covid-19-vaccine-during-pregnancy-protects-newborns>



# Example Case Presentations

## Jen Burns

# Questions?

Next Session: Wednesday, June 1<sup>st</sup>

For any questions, email us at  
[kshwest@peds.bsd.uchicago.edu](mailto:kshwest@peds.bsd.uchicago.edu)