

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

Reach



4500+

professionals



800+

organizations



30

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

20+ 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

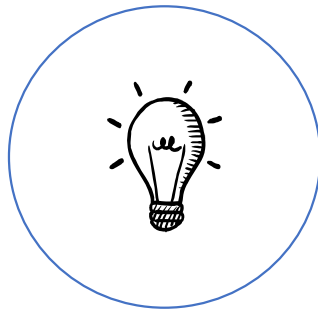
} adult
populations

} behavioral
health

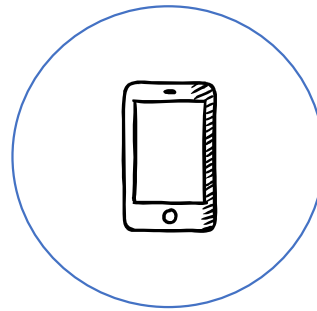
Illinois Vaccinates Against COVID-19 (I-VAC)



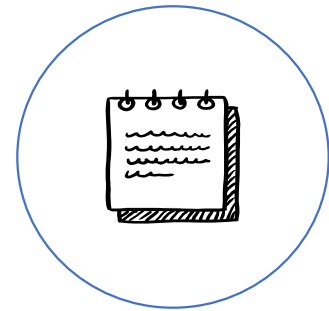
Foundational
Training



Learning
Collaboratives



Technical
Assistance



Toolkit & Outreach
Materials

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



Funding for the Illinois Vaccinates Against COVID-19 (I-VAC) project is provided by a grant award from the Office of Disease Control, Illinois Department of Public Health



Session Essentials

- CME credits
 - Information to claim credits will be shared at the end of March
 - 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 Patrick know at pgower@peds.bsd.uchicago.edu
- Session slides & recordings
 - Slides and recordings will be posted on <https://www.echo-chicago.org/topic/covid-19-in-pediatric-populations/> behind a firewall. Registration required to access
- Readiness survey
 - A pre-survey link was sent out. Please complete it ASAP



I-VAC Pediatric Learning Collaborative for COVID-19 Vaccination

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Pediatric Infectious Diseases
University of Chicago/Comer Children's Hospital



Disclosures

- No one in a position to control the education content of the activity has any relevant financial disclosures with ineligible companies to disclose.
- What gets said here today may change based on new data and recommendations
 - Knowledge is shared more rapidly through ECHO



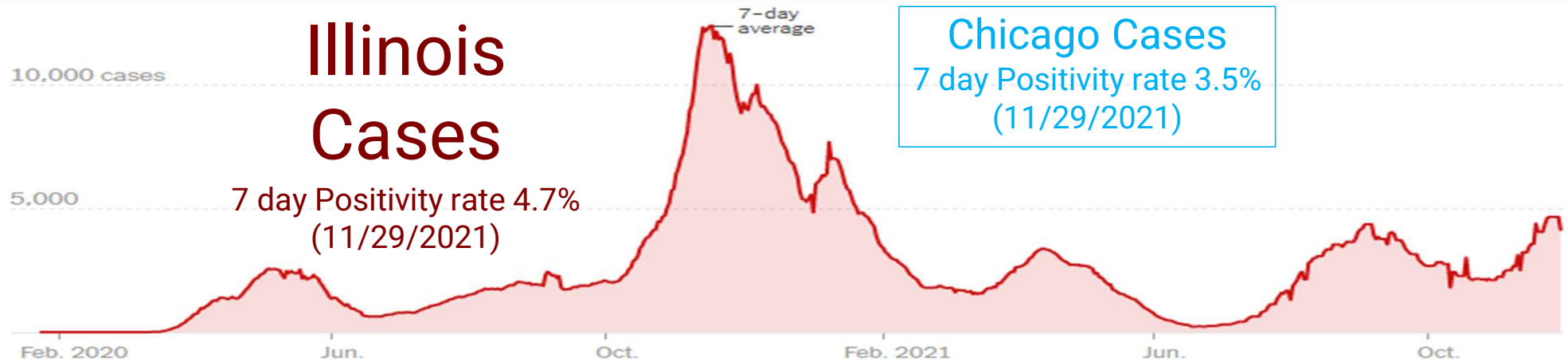
Agenda

- Epi report
- Vaccine
 - What if there wasn't a vaccine
 - Vaccine overview
- Example case presentation
- Q & A

Epi Report

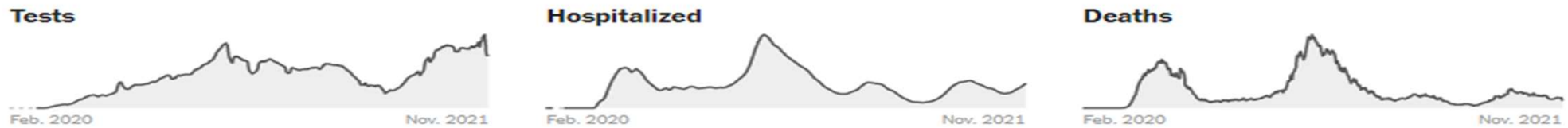


Illinois Cases



Chicago Cases

7 day Positivity rate 3.5% (11/29/2021)

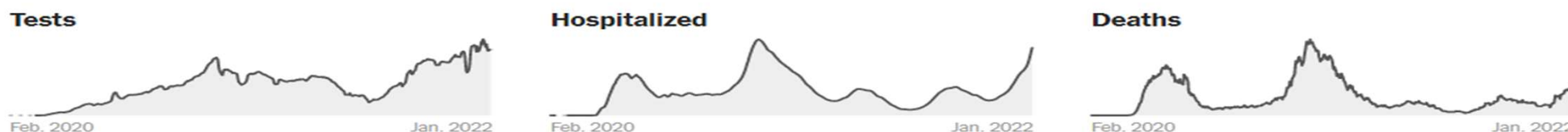
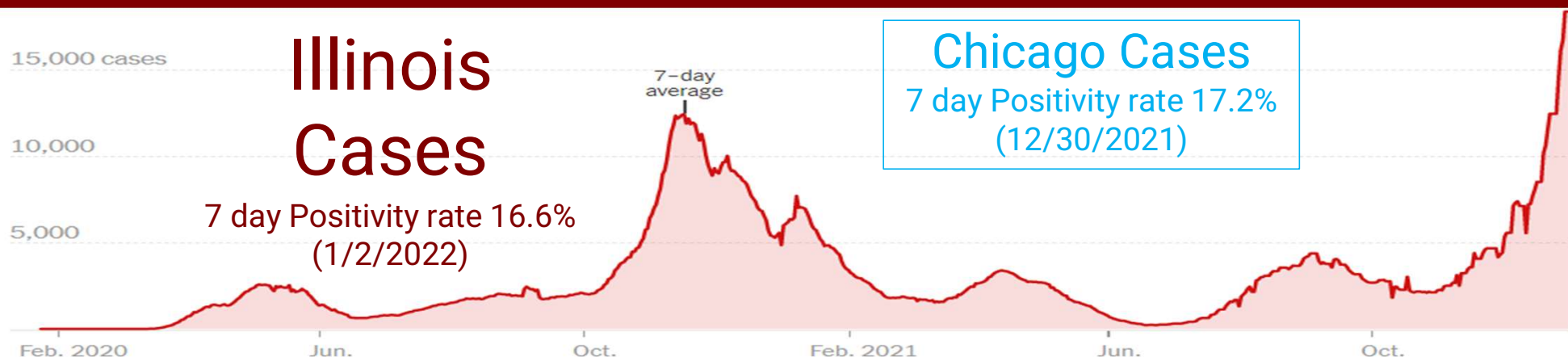


DAILY AVG. ON NOV. 29

14-DAY CHANGE

TOTAL REPORTED

Cases	4,138	+20%	1,809,427
Tests	76,659	-16%	—
Hospitalized	2,051	+32%	—
Deaths	19	-14%	29,349



DAILY AVG. ON JAN. 2

14-DAY CHANGE

TOTAL REPORTED

Cases	18,322	+116%	2,154,058
Tests	107,722	-2%	—
Hospitalized	5,575	+52%	—
Deaths	64	+25%	31,017

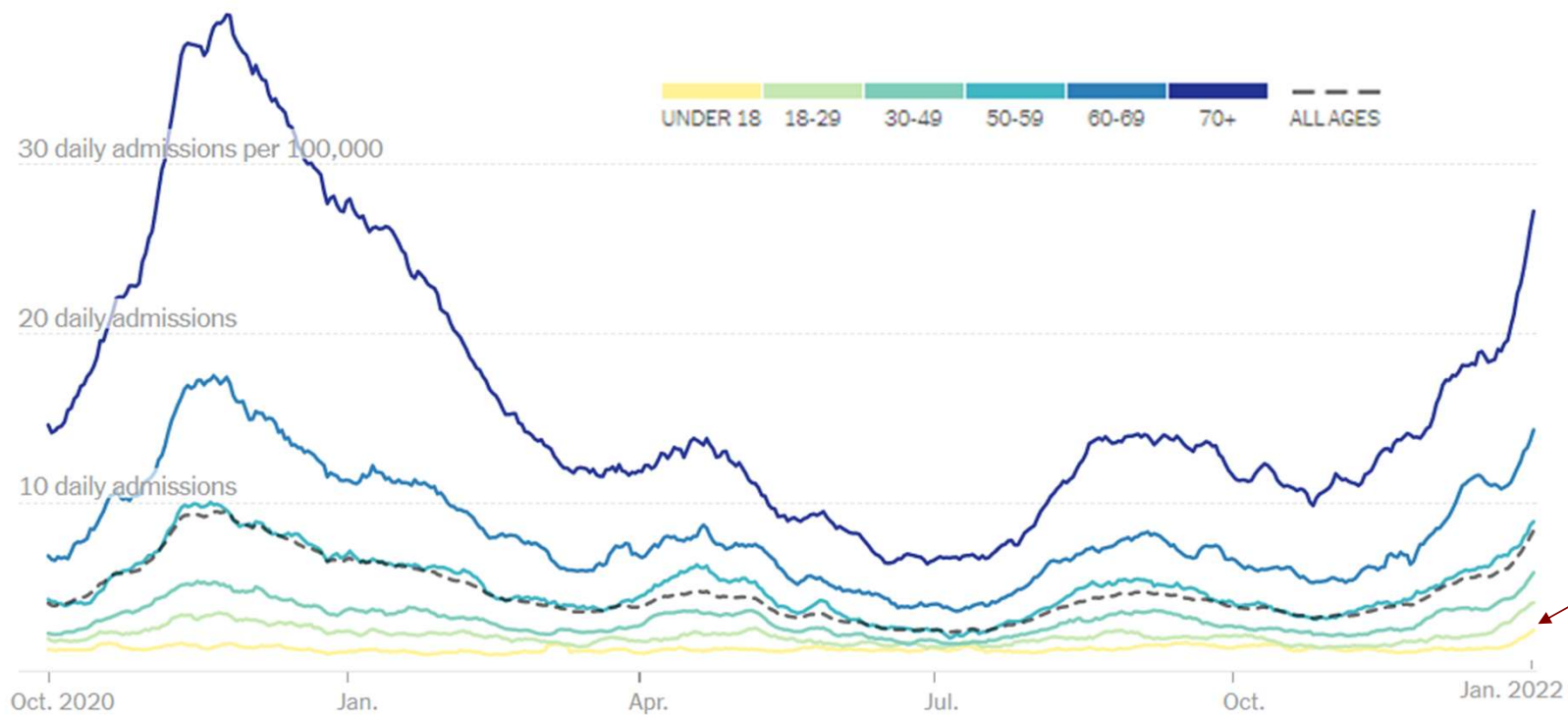


<https://www.nytimes.com/interactive/2020/us/illinois-coronavirus-cases.html>
<https://covidactnow.org/us/illinois-il?s=1330330>
<https://www.chicago.gov/city/en/sites/covid-19/home/covid-dashboard.html>



Daily New Hospitalizations by Age: Illinois

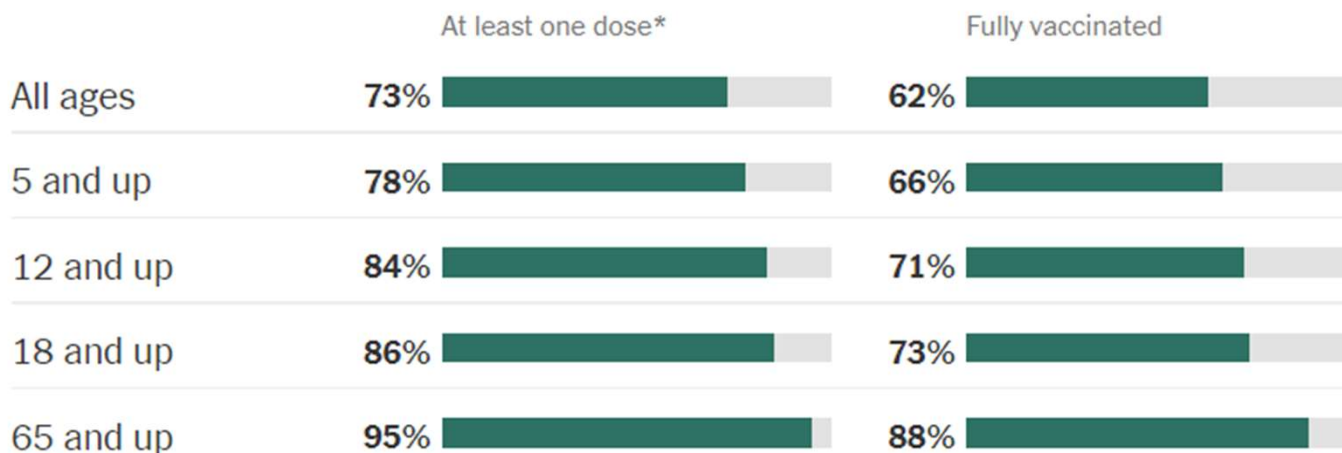
1/2/2022



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

Vaccine Doses (12/30/2021)

United States vaccinations



*The C.D.C. reported on Nov. 30 that booster doses are sometimes misclassified as first doses, which may overestimate first dose coverage among adults.

Sources: Centers for Disease Control and Prevention, U.S. Census Bureau | Note: Figures include the U.S. territories and three countries with [special agreements](#).

The C.D.C. also reported that about 68.8 million fully vaccinated people have received an additional vaccine dose

Vaccine Doses (12/27/2021)

Date Administered	AgeGroupVacc	Administered_Dose1_pct...	Series_Complete_Pop_pct...
2021 Dec 27 12:00:00 AM	5 - 11 Years	23%	14.2%
2021 Dec 27 12:00:00 AM	12 - 17 Years	63%	53.2%
2021 Dec 27 12:00:00 AM	18 - 24 Years	71.5%	58.7%
2021 Dec 27 12:00:00 AM	25 - 39 Years	75.1%	63%
2021 Dec 27 12:00:00 AM	40 - 49 Years	82.9%	71.2%
2021 Dec 27 12:00:00 AM	50 - 64 Years	90.1%	78.3%
2021 Dec 27 12:00:00 AM	65 - 74 Years	95%	89.8%
2021 Dec 27 12:00:00 AM	75+ Years	95%	84.4%

<https://data.cdc.gov/Vaccinations/COVID-19-Vaccination-and-Case-Trends-by-Age-Group-/gxj9-t96f>

What If There Wasn't a Vaccine? (Why Vaccinate?)

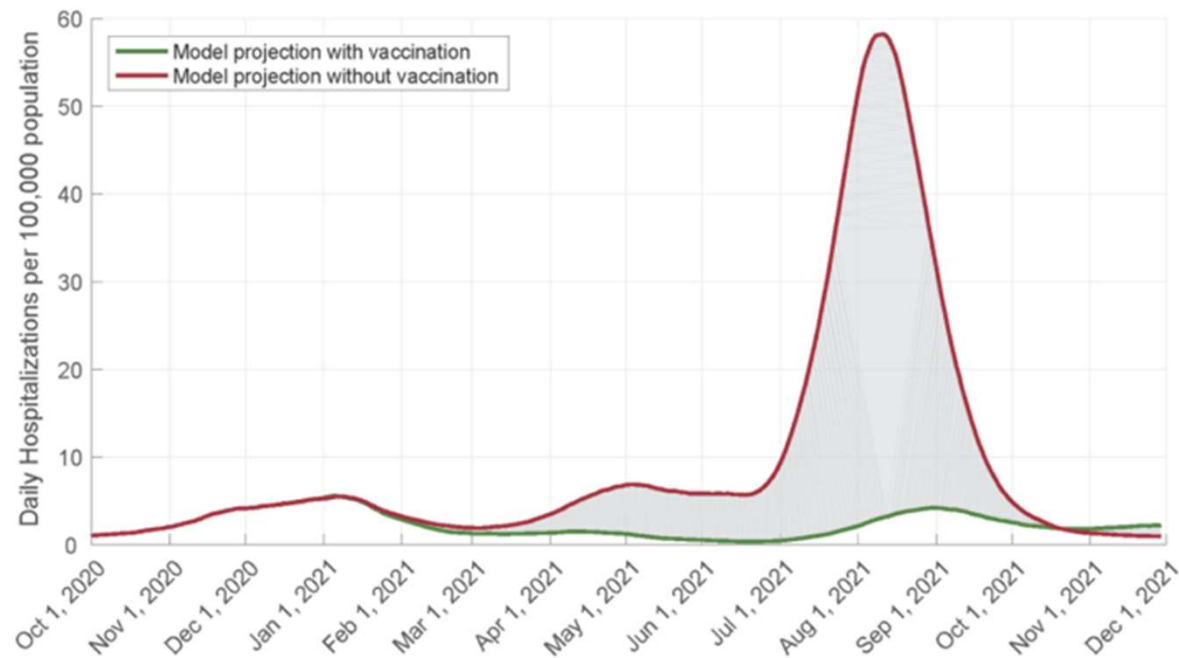
How Commonwealth Fund Conducted the Study

- To evaluate the impact of the vaccination program in the US, researchers modeled COVID-19 immunity including waning of naturally acquired or vaccine-elicited immunity, as well as booster vaccination, **pre-Omicron**
- Modeled the population demographics of the U.S., empirically determined contact networks accounting for pandemic mobility patterns, and age-specific risks of severe health outcomes due to COVID-19
- Vaccine efficacies against infection and symptomatic and severe disease for different vaccine types – for each variant and by time since vaccination – were drawn from published estimates
- The researchers evaluated the impact of vaccine rollout by simulating the pandemic trajectory under the counterfactual scenario of no vaccination program

<https://www.commonwealthfund.org/publications/issue-briefs/2021/dec/us-covid-19-vaccination-program-one-year-how-many-deaths-and>

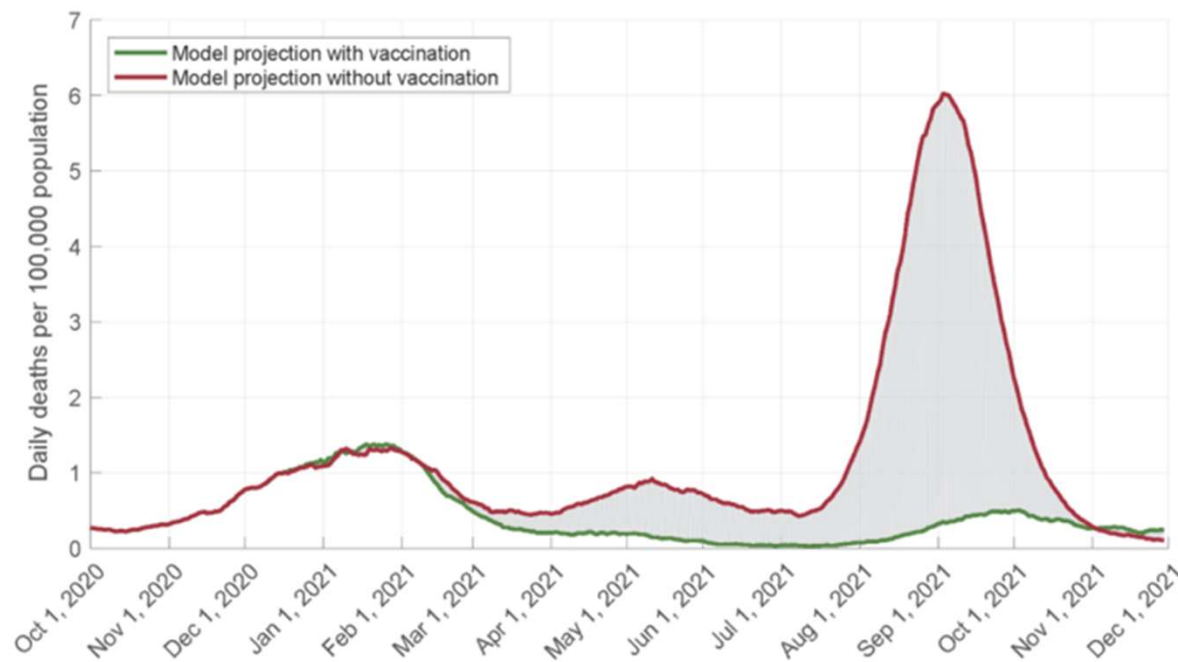


Projected U.S. Seven-Day Rolling Average of Daily Hospitalizations per 100,000 Population With and Without Vaccination



<https://www.commonwealthfund.org/publications/issue-briefs/2021/dec/us-covid-19-vaccination-program-one-year-how-many-deaths-and>

Projected U.S. Seven-Day Rolling Average of Daily Deaths per 100,000 Population, With and Without Vaccination



<https://www.commonwealthfund.org/publications/issue-briefs/2021/dec/us-covid-19-vaccination-program-one-year-how-many-deaths-and>

Estimates of COVID-19-Attributable Deaths, Hospitalizations, and Infections Averted by the U.S. Vaccination Program Between December 12, 2020 and November 30, 2021

	Averted number	95% Credible Interval*
Deaths	1,087,191	950,101 to 1,231,195
Hospitalizations	10,319,961	9,016,329 to 11,748,945
Infections	35,903,646	29,840,604 to 41,843,396

Without the U.S. vaccination program, COVID-19 deaths would have been approximately 3.2 times higher and COVID-19 hospitalizations approximately 4.9 times higher than the actual toll during 2021.

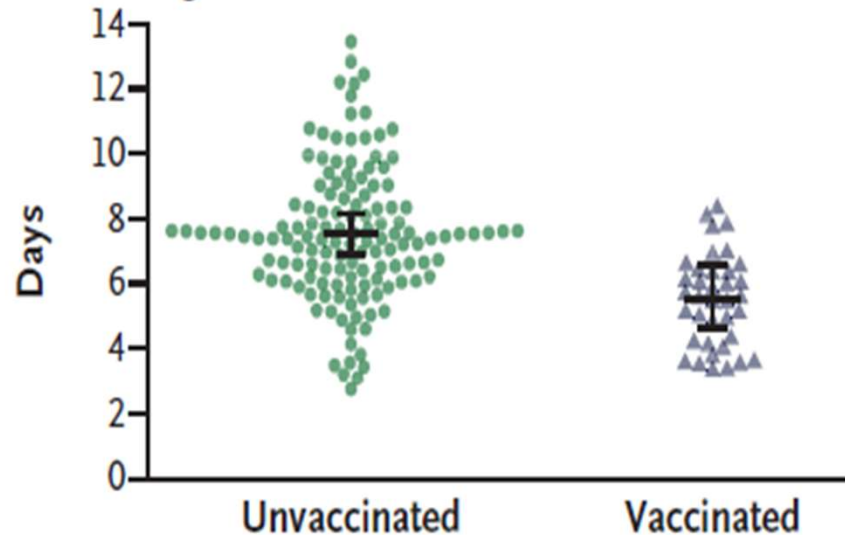
* Credible intervals reflect the range of normal uncertainty associated with estimates.

Source: Eric C. Schneider et al., *The U.S. COVID-19 Vaccination Program at One Year: How Many Deaths and Hospitalizations Were Averted?* (Commonwealth Fund, December 2021). <https://doi.org/10.26099/3542-5n54>

<https://www.commonwealthfund.org/publications/issue-briefs/2021/dec/us-covid-19-vaccination-program-one-year-how-many-deaths-and>

Viral Clearance Based on Vaccination Status

G Clearance Time According to Vaccination Status



NEJM 2021; 85;26. <https://www.nejm.org/doi/full/10.1056/NEJMc2102507>

What the evidence says about the risks

Benefits

Prevention of COVID-19 cases

Likely prevention of hospitalizations, MIS-C and deaths and post-COVID conditions

Possible prevention of transmission

Greater confidence in safer return to school and social interactions

Shorter shedding time



Risks

Myocarditis or other rare events after mRNA vaccines?

Short-term reactogenicity

https://emergency.cdc.gov/coca/ppt/2021/110421_slide.pdf



COVID Vaccine



U.S. COVID-19 Vaccines



	Dilute Before Use		Do NOT Dilute before Use
Age Group	5 to 11	12 +	12 +
Vial Cap/label with color border	ORANGE	PURPLE	GREY
Dose	10 mcg	30 mcg	30 mcg
Dose Volume	0.2 mL	0.3 mL	0.3 mL
Amount of diluent per vial	1.3 mL	1.8 mL	NO DILUTION
Doses per vial	10 doses (after dilution)	6 doses (after dilution)	6 doses
ULT-cold freezer (-90°C to -60°C)	9 months	9 months	9 months
Freezer (-25°C to -15°C)	N/A	2 weeks	N/A
Refrigerator (2°C to 8°C)	10 weeks	1 month	10 weeks
Room Temp (8°C to 25°C)	12 hours prior to dilution (including thaw time)	2 hours prior to dilution (including thaw time)	12 hours prior to first puncture (including thaw time)
After first puncture (2°C to 25°C)	12 hours, then discard	6 hours, then discard Product being retired 12/23/21	12 hours, then discard



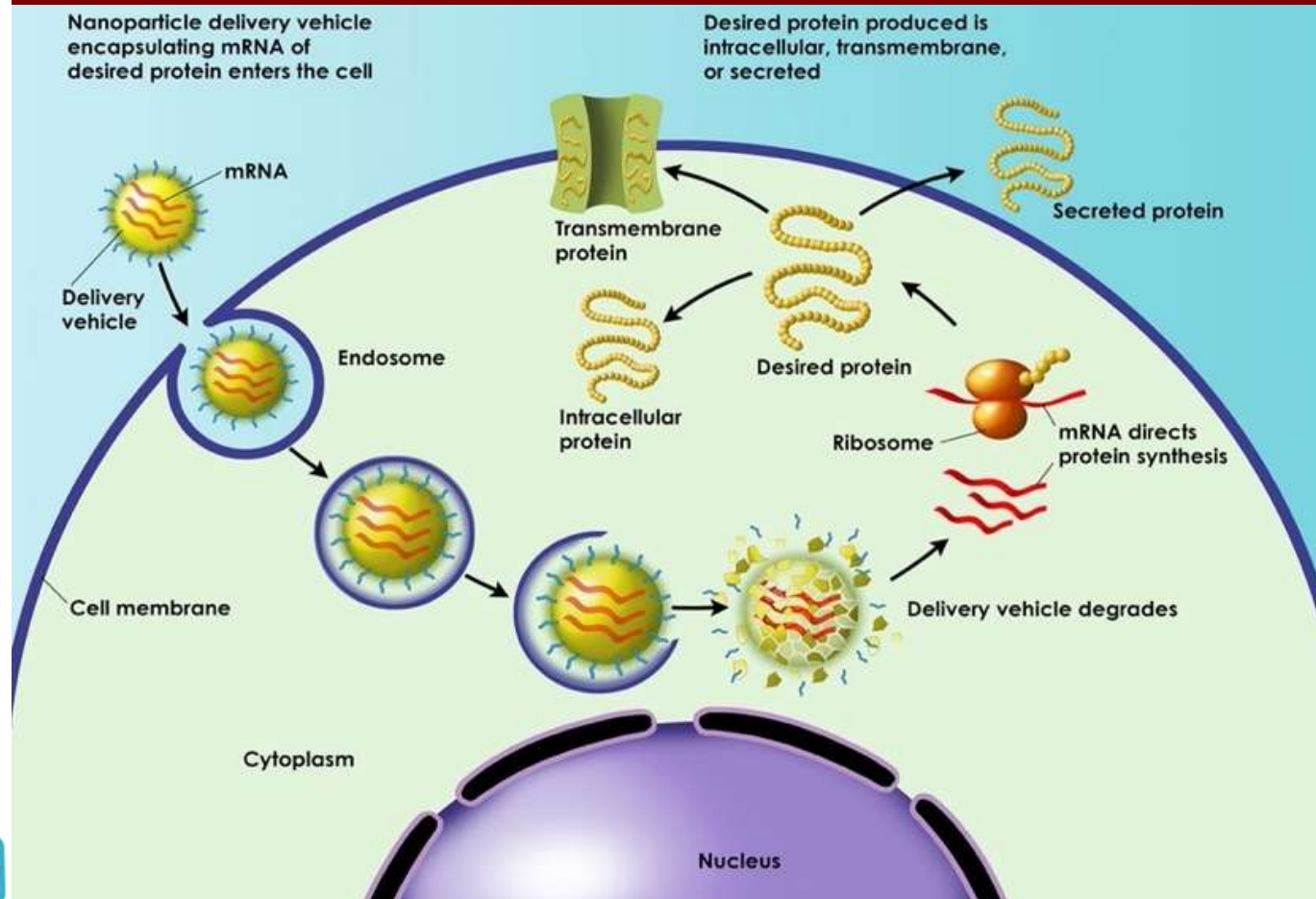
Pfizer Products

12/14/ 2021
<https://www.cvdvaccine-us.com/images/pdf/Vaccine-Formulation-Presentation-Guide.pdf>

Vaccine Types

- Pfizer and Moderna are mRNA vaccines
 - There is no virus in the vaccine
- Johnson and Johnson vaccine is an attenuated human adenovirus vaccine
 - There is no coronavirus in the vaccine

How Do mRNA COVID Vaccines Work?



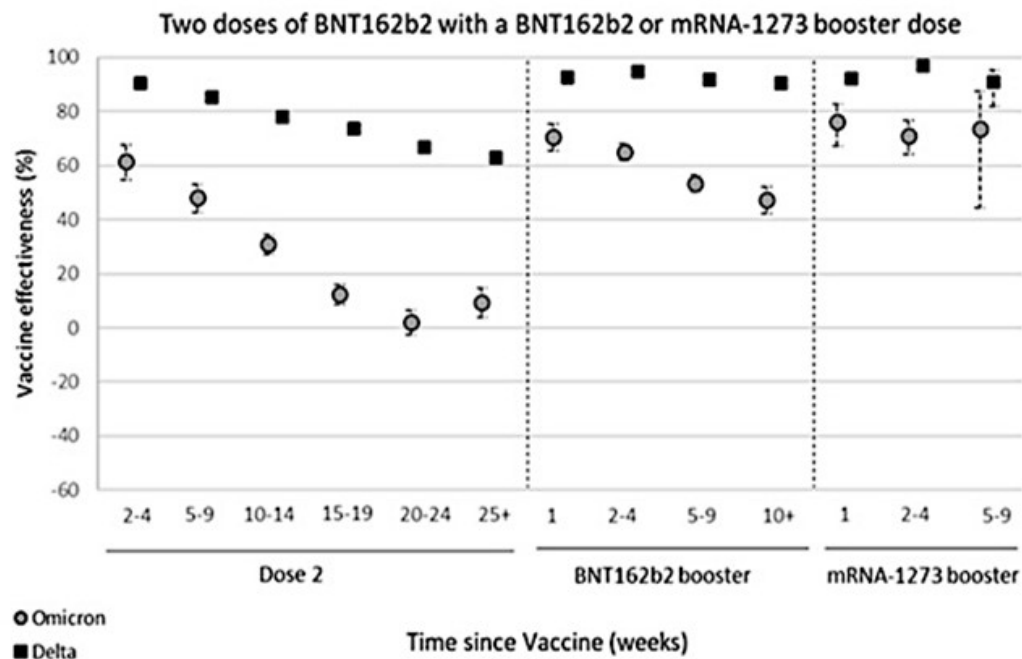
How Well Do COVID Vaccines Work

	Moderna	Pfizer	Johnson & Johnson
Protection from hospitalization from COVID-19	100%	100%	100%
Protection from COVID-19 severe disease	97%	100%	85%
Protection from mild COVID-19	94%	95%	66% globally

- Protection from infection was in the 90-95% range for Moderna and Pfizer, and 70% for J&J prior to delta and omicron
- How about for the delta variant?
 - Similar results as in the table for protection from hospitalization and severe disease
 - Protection from infection is less: 65-80% for Moderna and Pfizer vaccines, lower with J&J
- Omicron?

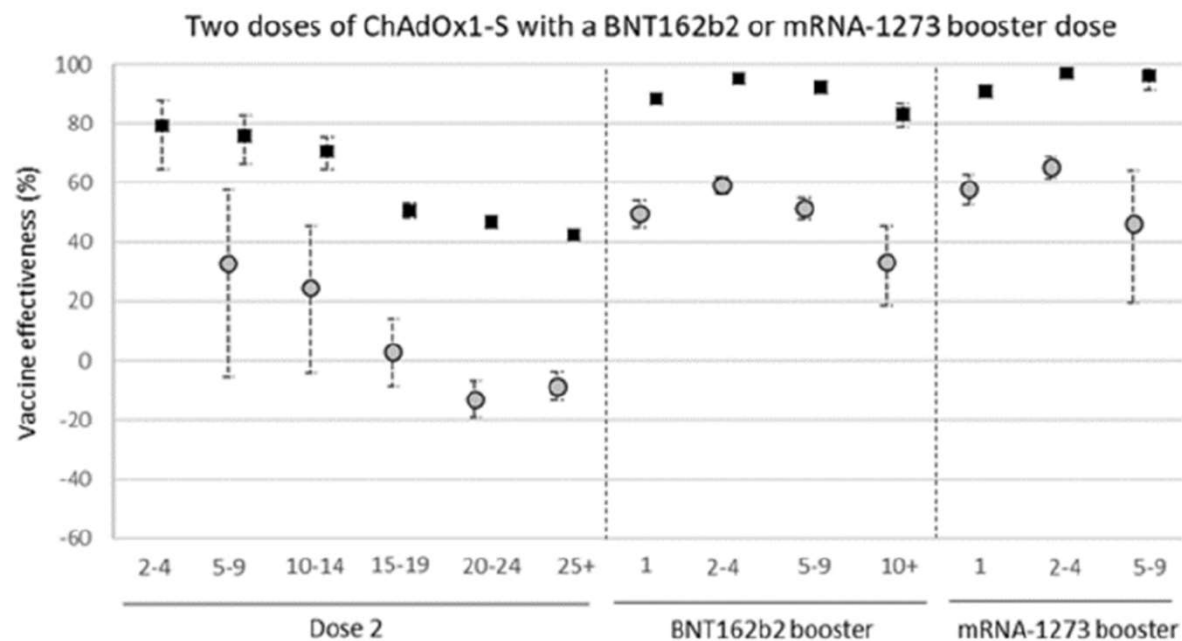
<https://www.nebraskamed.com/COVID/covid-19-vaccine-efficacy-explained>

Vaccine Efficacy as Measured by Infection Risk For Delta vs. Omicron



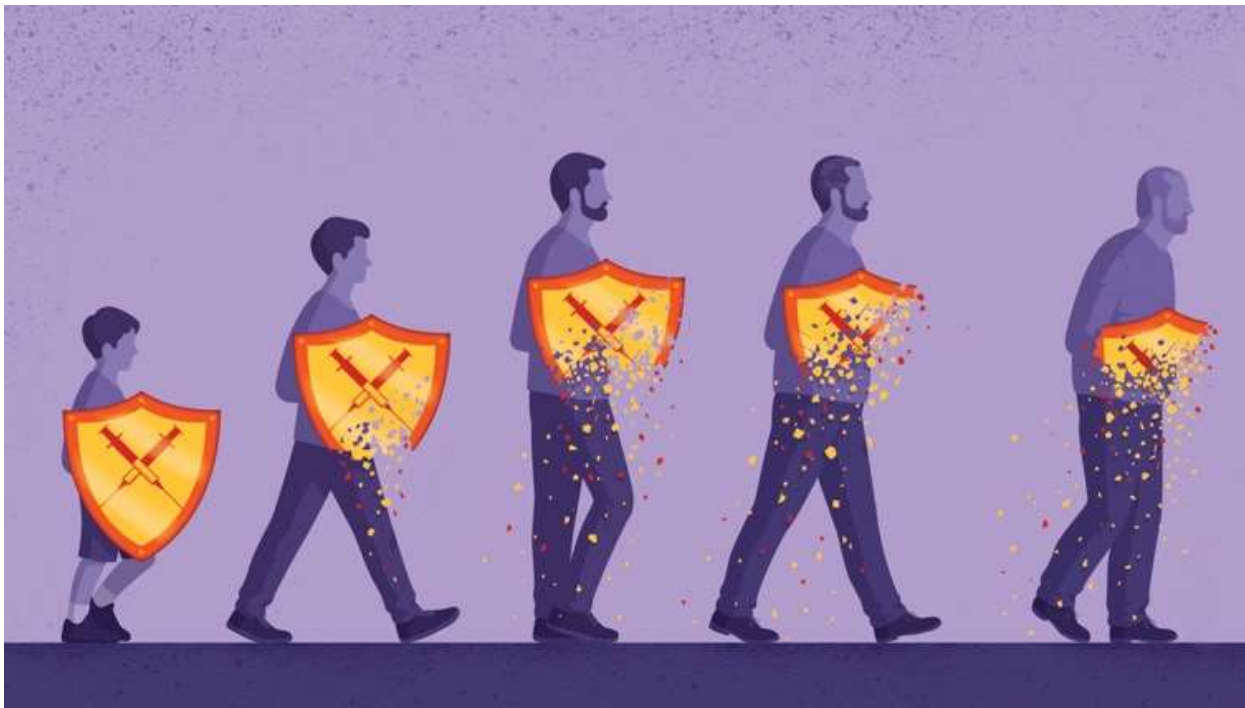
SARS-CoV-2 variants of concern and variants under investigation in England: technical briefing 33
<https://www.gov.uk/government/publications/investigation-of-sars-cov-2-variants-technical-briefings>

Vaccine Efficacy as Measured by Infection Risk For Delta vs. Omicron



SARS-CoV-2 variants of concern and variants under investigation in England: technical briefing 33
<https://www.gov.uk/government/publications/investigation-of-sars-cov-2-variants-technical-briefings>

Waning Immunity



<https://www.science.org/doi/10.1126/science.364.6437.224>

Do I qualify for a COVID-19 vaccine booster and which one?



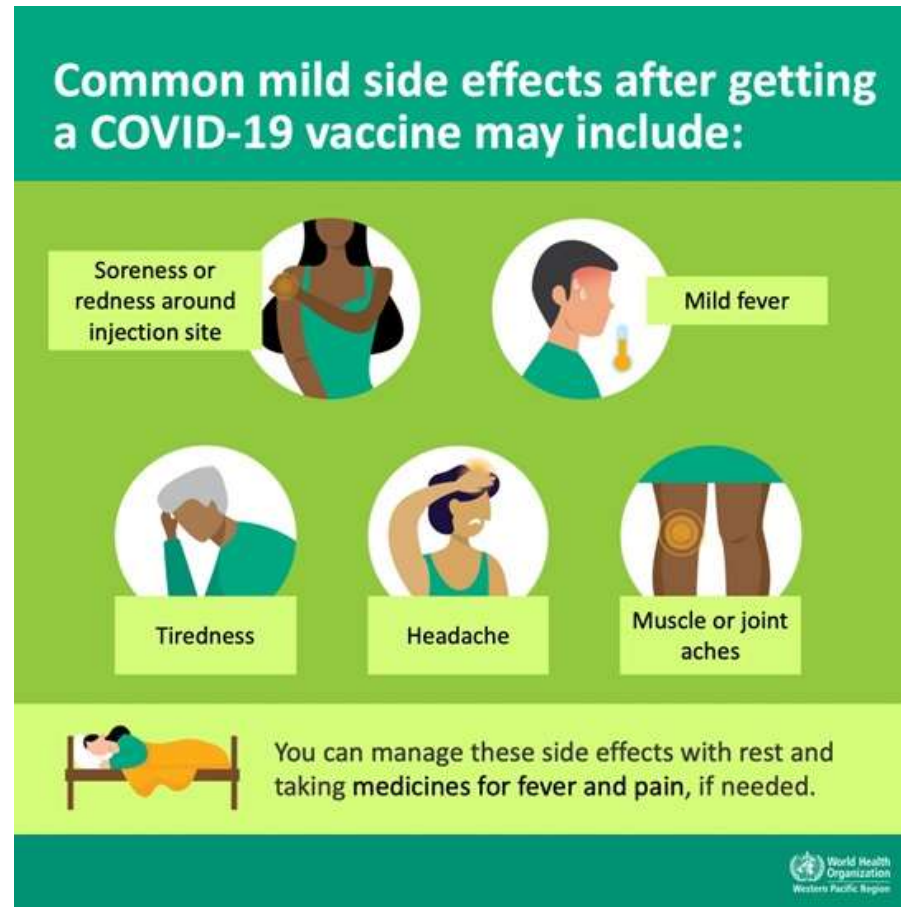
Which primary vaccine series did you complete?	Pfizer-BioNTech	Moderna	Janssen (J&J)
You can get a booster if:	It's been at least 5 months since completing the primary series AND you are:	It's been at least 6 months since completing the primary series AND you are:	It's been at least 2 months since completing the primary vaccination AND you are:
	Age 12+	Age 18+	Age 18+
If eligible, you can get a booster of:	Pfizer-BioNTech* Moderna Janssen (J&J) <small>*Only Pfizer-BioNTech can be used as a booster in those age 12-17.</small>	Moderna Pfizer-BioNTech Janssen (J&J)	Janssen (J&J) Pfizer-BioNTech Moderna

For more information, visit www.fda.gov/covid19vaccines.

A third primary series dose for certain immunocompromised children ages 5-11

Common Vaccine Side Effects

Symptoms
last for less
than 48-72
hours



Rare Side Effects



mRNA vaccines

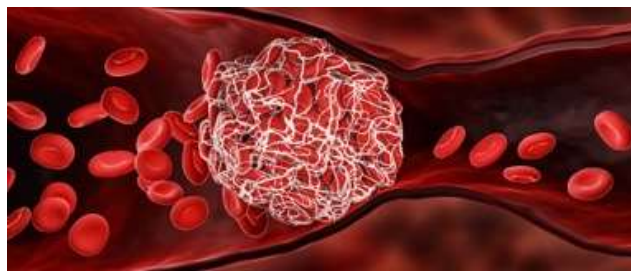
Myocarditis seen in 1 in 8,000 doses for >12 years old boys

<https://www.news-medical.net/news/20210617/Myocarditis-after-SARS-CoV-2-vaccine.aspx>

1 in a 100 (1%) children with COVID shows evidence of carditis, much higher in adults

1 in a 100 (1%) to 1 in 10 (10%) adults with COVID develop blood clots without blood thinner prevention steps

Blood clot seen in 1 in 20,000 doses in young adults



Adenovirus vaccines

<https://healthmatters.nyp.org/what-to-know-about-blood-clots-and-covid-19/>



8.7 million* COVID-19 vaccinations have been given to children ages 5-11 years old

Health check-ins to v-safe completed for over 42,000 children after vaccination[†]

Side effects were common but mild and brief[§]

- ✓ Pain where shot was given
- ✓ Fatigue
- ✓ Headache



Mild side effects are a normal sign the body is building protection



Few myocarditis cases have been reported



Vaccination is the best way to protect children from COVID-19 complications



* As of December 19, 2021

[†] V-safe, a voluntary smartphone vaccine safety monitoring system

[§] After the 2nd dose, about 2/3 children had a local reaction such as arm pain; 1/3 had a reaction beyond the injection site

bit.ly/MMWR705152a1

MMWR



Reactions reported for children aged 5–11 years (N = 42,504) who completed at least one v-safe health check-in survey on days 0–7

- Myocarditis in children 5–11 years old: 11 verified VAERS reports among approximately eight million vaccine doses
- In an active vaccine safety surveillance system, no chart-confirmed reports of myocarditis were observed during the 1–21 days or 1–42 days after 333,000 vaccine doses

Event	% of v-safe enrollees reporting reaction or health impact*	
	Dose 1 (N = 42,504)	Dose 2 (n = 29,899)
Any injection site reaction	54.8	57.5
Itching	3.8	3.7
Pain	52.7	55.8
Redness	3.7	4.4
Swelling	3.9	4.9
Any systemic reaction	34.7	40.9
Abdominal pain	5.1	6.4
Myalgia	7.1	10.2
Chills	3.9	6.8
Diarrhea	2.6	2.2
Fatigue	20.1	25.9
Fever	7.9	13.4
Headache	13.9	19.8
Joint pain	2.1	2.9
Nausea	5.0	6.9
Rash	1.2	1.0
Vomiting	2.3	2.7
Any health impact	10.9	15.1
Unable to perform normal daily activities	5.1	7.4
Unable to attend school	7.9	10.9
Needed medical care	1.2	1.1
Telehealth	0.3	0.2
Clinic	0.6	0.6
Emergency visit	0.1	0.1
Hospitalization	0.02	0.02

* Percentage of enrollees who reported a reaction or health impact at least once during days 0–7 post-vaccination.

Pregnancy and Breastfeeding



<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 Presentation 1

Example Case Presentation 2

Ordering COVID-19 Vaccine

COVID-19 Vaccine Ordering



✓ **Gray plastic cap and label with gray border.**



Pfizer Vaccine ordering (12 y.o. and older)

Purple Cap

- Direct ship order minimum is 1170 doses****
 - ***Purple tops phased out 12/23
- Health Departments
 - May allow smaller size dose pick up
- Ultra cold Frozen
 - 9 months
- Freezing
 - 2 weeks
- Refrigerated
 - Good for 30 days

Gray Cap

- Direct ship order minimum is 300 doses
- Health Departments
 - May allow smaller size dose pick up
- Ultra cold Frozen
 - 9 months
- Freezing: Do not store
- Refrigerated
 - Good for 10 weeks

Pediatric (Orange Cap) Pfizer COVID VACCINE



- Minimum order is 100 doses
- Health Departments
 - May allow smaller size dose pick up
- Ultra Cold Frozen
- Refrigerated
 - Good for 10 weeks

Other COVID-19 Vaccines

Moderna

- Direct ship minimum order is 100
- Ultra cold Frozen: Do not Store
- Freezing (-25 to -15 C)
 - 6 months
- Refrigerated
 - Good for 30 days

J&J

- Direct ship minimum order is 100
- Ultra cold Frozen: Do not Store
- Freezing: Do not Store
- Refrigerated
 - Good for 6 months

www.illinoisvaccinates.com/

Bootcamp Cohort



Day 01 – Jan 18, 2022 08:00 AM
Day 02 – Jan 25, 2022 08:00 AM
Day 03 – Feb 1, 2022 08:00 AM
Day 04 – Feb 8, 2022 08:00 AM

[SignUp](#)



A screenshot of the I-VAC website. The main header is orange with the text "ILLINOIS VACCINATES AGAINST COVID-19" and "Supporting COVID-19 Vaccination Efforts in Illinois". Below this is a section titled "VACCINE IMPLEMENTATION SUPPORT, EDUCATION, AND RESOURCES" with a description of the program's goal. To the right is a section titled "ONLINE LEARNING COLLABORATIVES" with a description of the Phase Two Learning Collaborative. Below these are two smaller sections: "COVID-19 VACCINE TRAINING BOOTCAMPS" and "VACCINE ADMINISTRATION AND DISTRIBUTION RESOURCES". On the far right, there are two smaller screenshots of the website showing "LEARNING COLLABORATIVES" and "COVID-19 VACCINE BOOTCAMPS". At the bottom right is a large logo for "I-VAC ILLINOIS VACCINATES AGAINST COVID-19" with a stylized Illinois map.