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

ESTABLISHED 2010

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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

pediatric populations

- Diabetes
- Geriatrics for SNFs
- Resistant hypertension

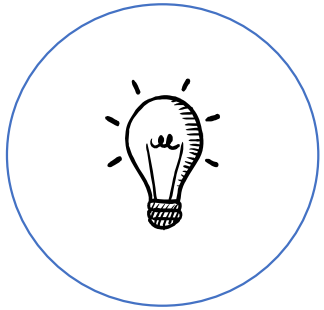
adult populations

- Childhood adversity & trauma
- Opioid use disorder
- Serious mental illness

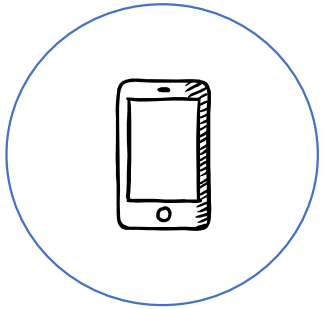
behavioral health

Illinois Vaccinates Against COVID-19 (I-VAC)

Foundational Training



Learning Collaboratives



Technical Assistance

Toolkit & Outreach Materials

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

I-VAC ILLINOIS VACCINATES AGAINST COVID-19

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

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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

Daniel Johnson, MD
Professor of Pediatrics

Jennifer Burns, RN, MSN, CPNP

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

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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

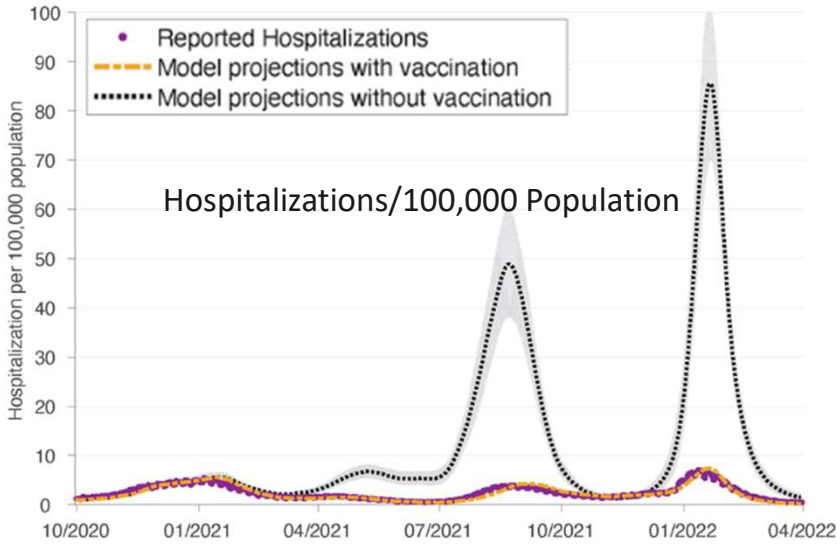
Agenda

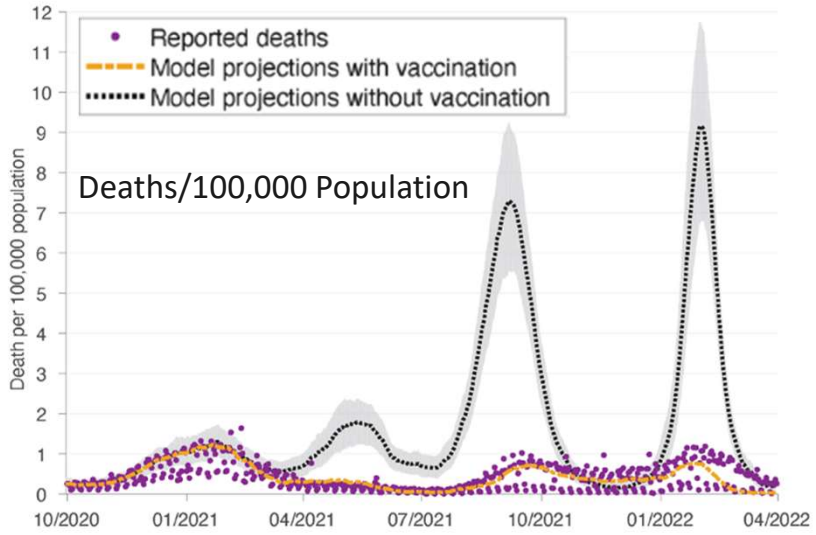
- Vaccine
  - What if there wasn't a vaccine
  - Vaccine overview
- COVID Report
- Example case presentation
- Q & A

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

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





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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

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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?

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

COVID Vaccine Overview

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Vaccination Status: Illinois 5/9/2022

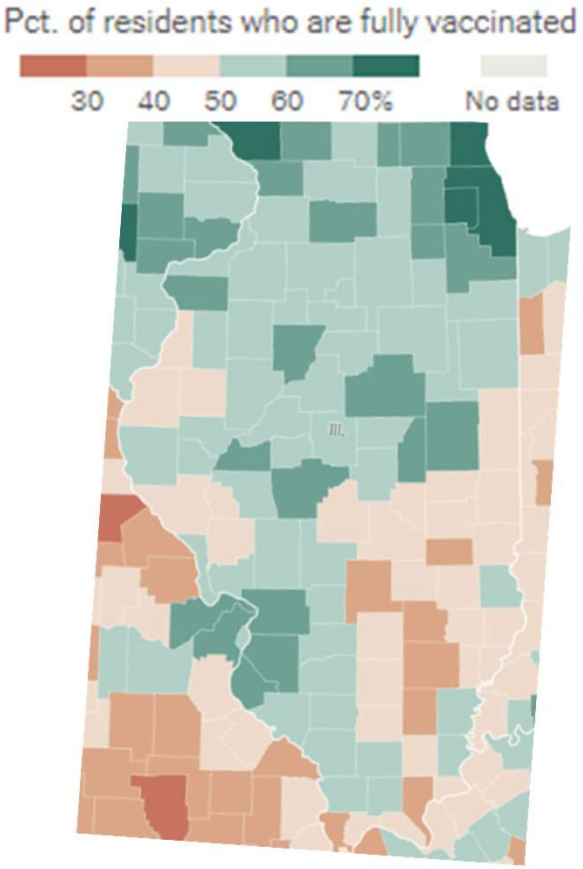
Vaccinations by age group

Percentage of fully-vaccinated residents

Name	5 to 11	12 to 17	18 to 64 ▾	65 and up
U.S. total*	29%	59%	73%	90%
Illinois	38%	65%	75%	89%

Percentage of residents with a booster

Name	Under 18	18 to 64 ▾	65 and up
U.S. total*	5%	31%	62%
Illinois	7%	37%	69%



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https://www.nytimes.com/interactive/2020/us/covid-19-vaccine-doses.html

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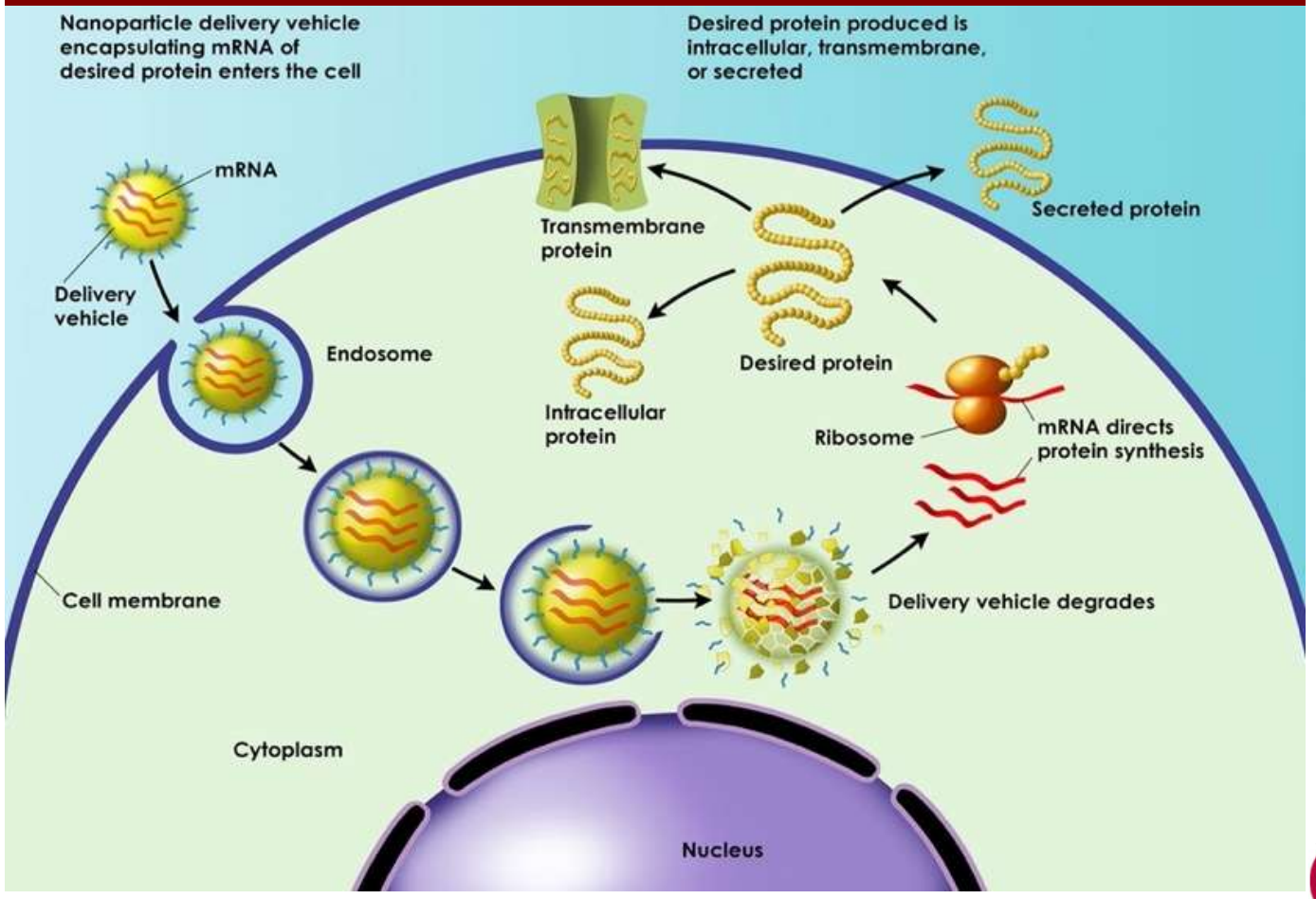
U.S. COVID-19 Vaccines

Vaccine Types

- Pfizer and Moderna are mRNA vaccines
  - There is no virus in the vaccine
- Janseen (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?



https://www.genengnews.com/uncategorized/mrna-based-drugs-prepare-to-go-the-distance/

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

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Pfizer Products

Only vaccine approved for those younger than 18 years old

4/26/2022. Modified from https://www.cvdvaccine-us.com/images/pdf/Vaccine-Formulation-Presentation-Guide.pdf

Moderna & Janssen

	Moderna (Spikevax)	Janssen (Johnson & Johnson)
Doses in primary series	Two doses given 28 days apart*	One dose**
Doses per vial	10	5
After first puncture	Administer within 12 hours	Administer within 6 hours if refrigerated or within 2 at room temperature
ULT-cold freezer (-90°C to -60°C)	N/A	N/A
Freezer (-25°C to -15°C)	Up to expiration date	N/A
Refrigerator (2°C to 8°C)	30 days	Up to expiration date

*Additional primary dose in immunocompromised persons
**Additional primary dose in immunocompromised persons mRNA COVID-19 Vaccine should be used

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

Guide for persons 12-49 years old*

Are you moderately or severely immunocompromised?

NO

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

YES

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+)

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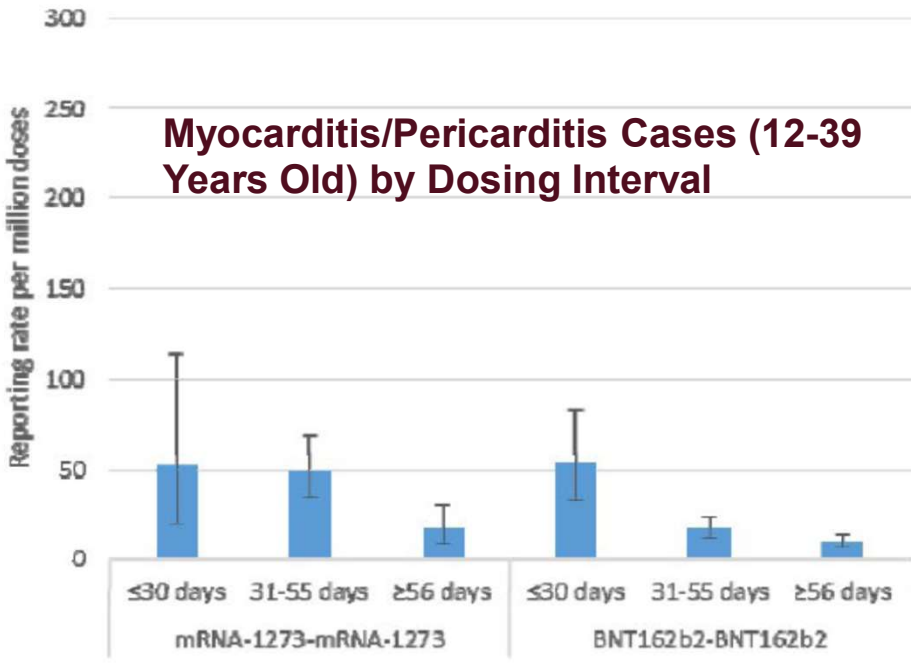
8 week interval has been evaluated in those 12-39 years old and interval acceptable for older people per CDC



2 Moderna 2 Pfizer-BioNTech

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

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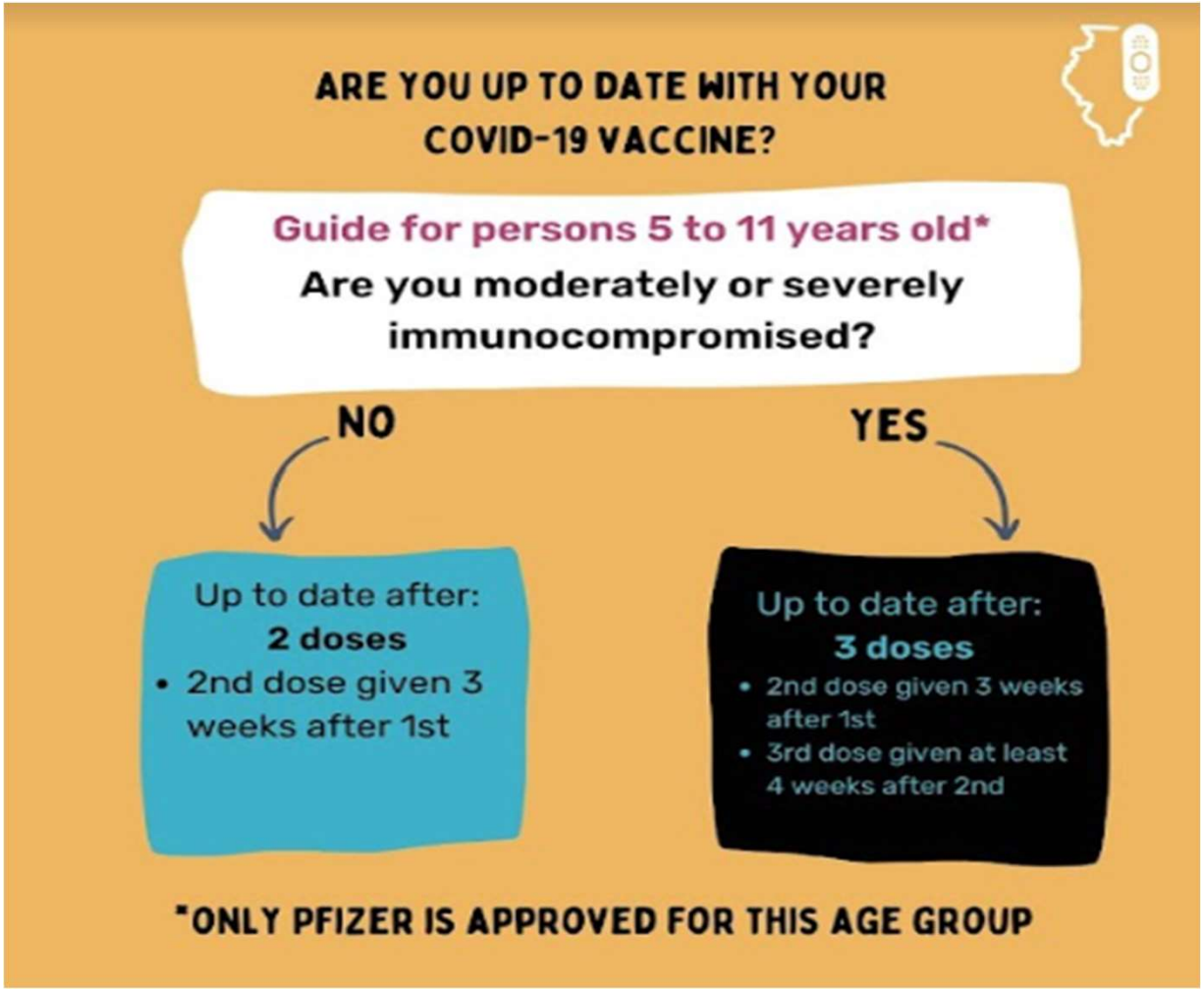

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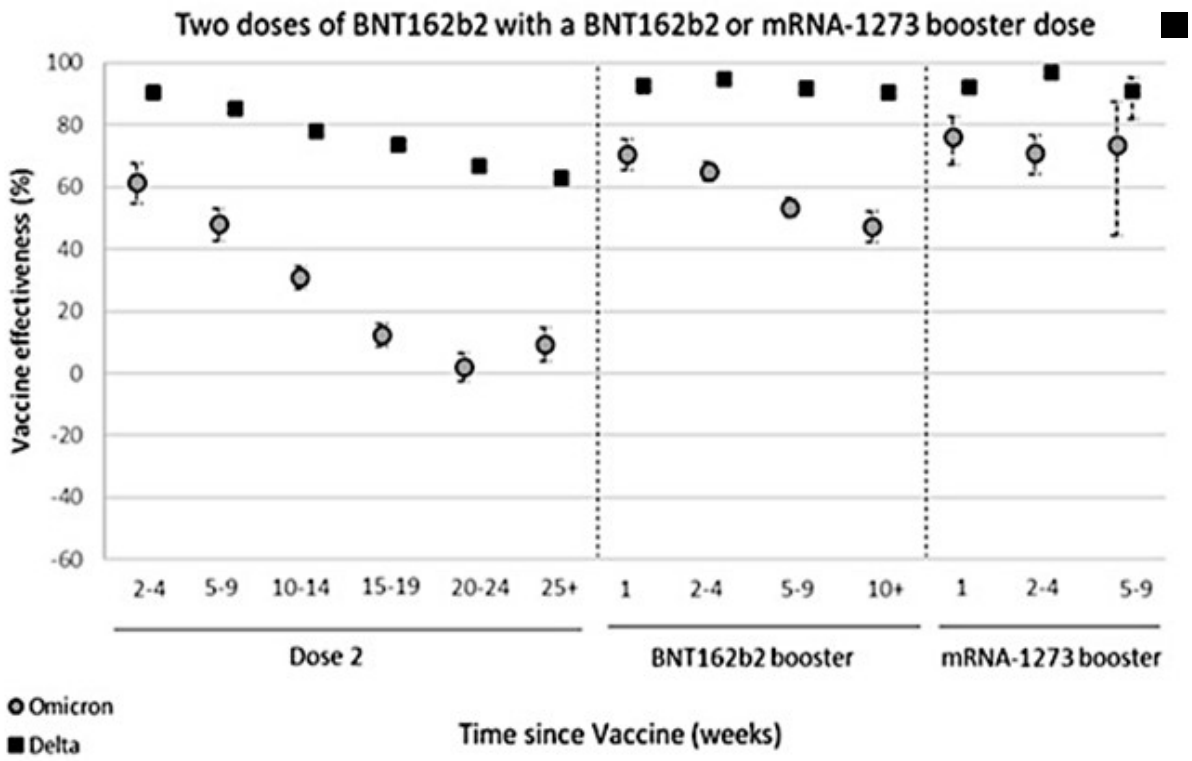
Who is Immunocompromised?

- BMI ≥85th 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

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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

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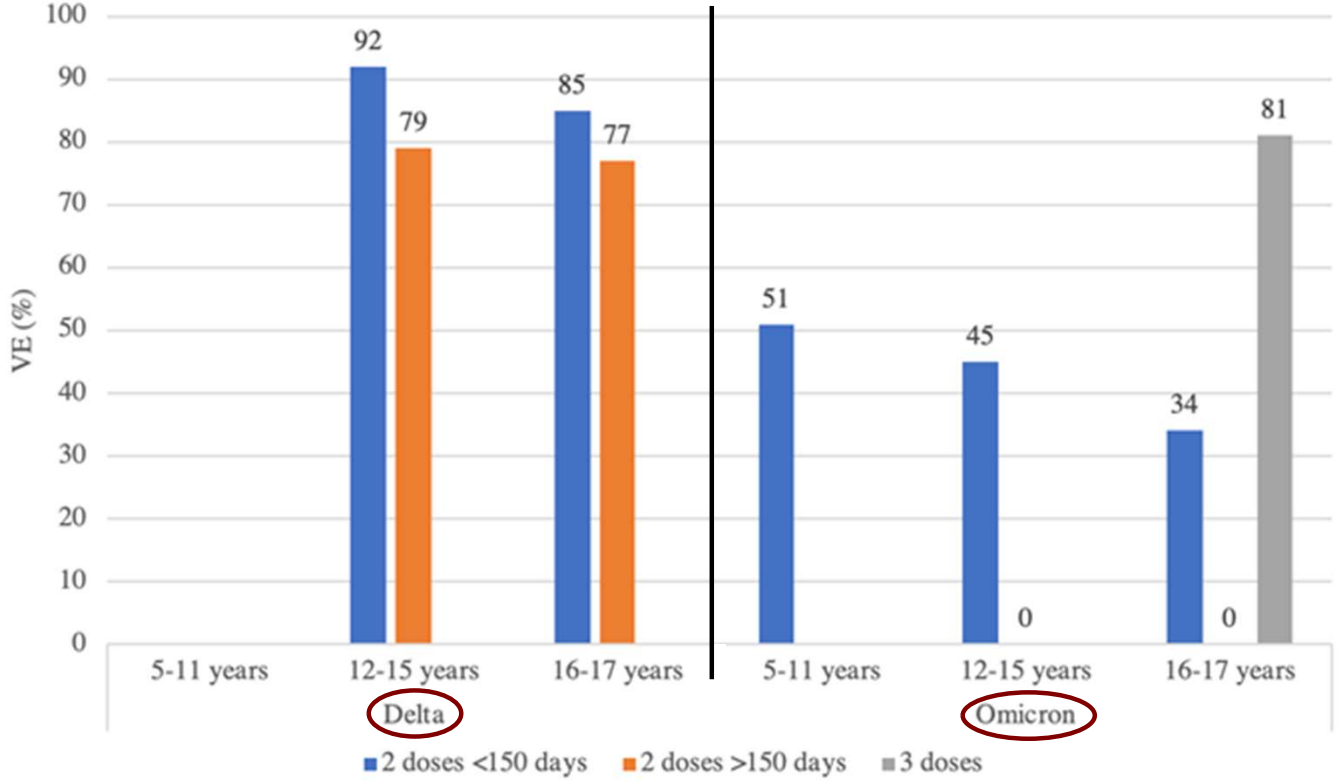
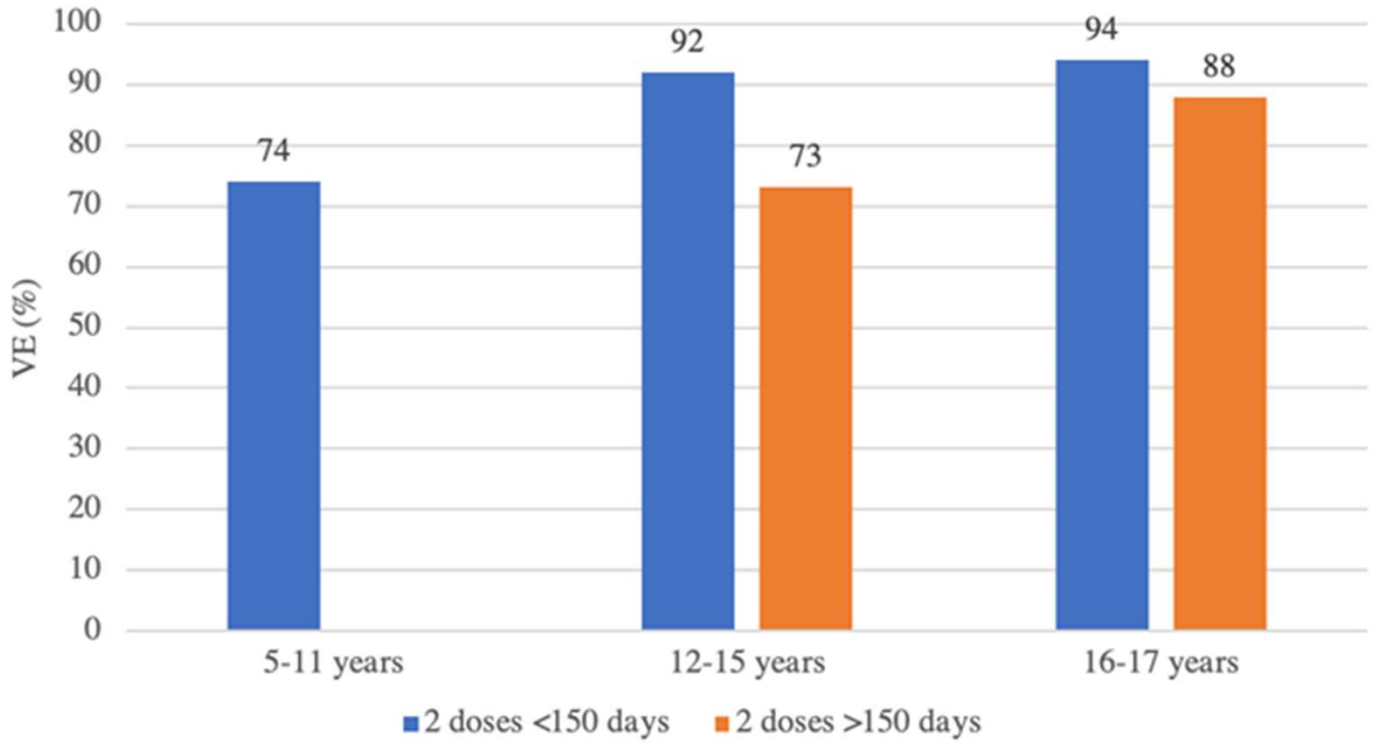
Vaccine Effectiveness Against ER and Urgent Care Visits for Kids in US



- 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)



- 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

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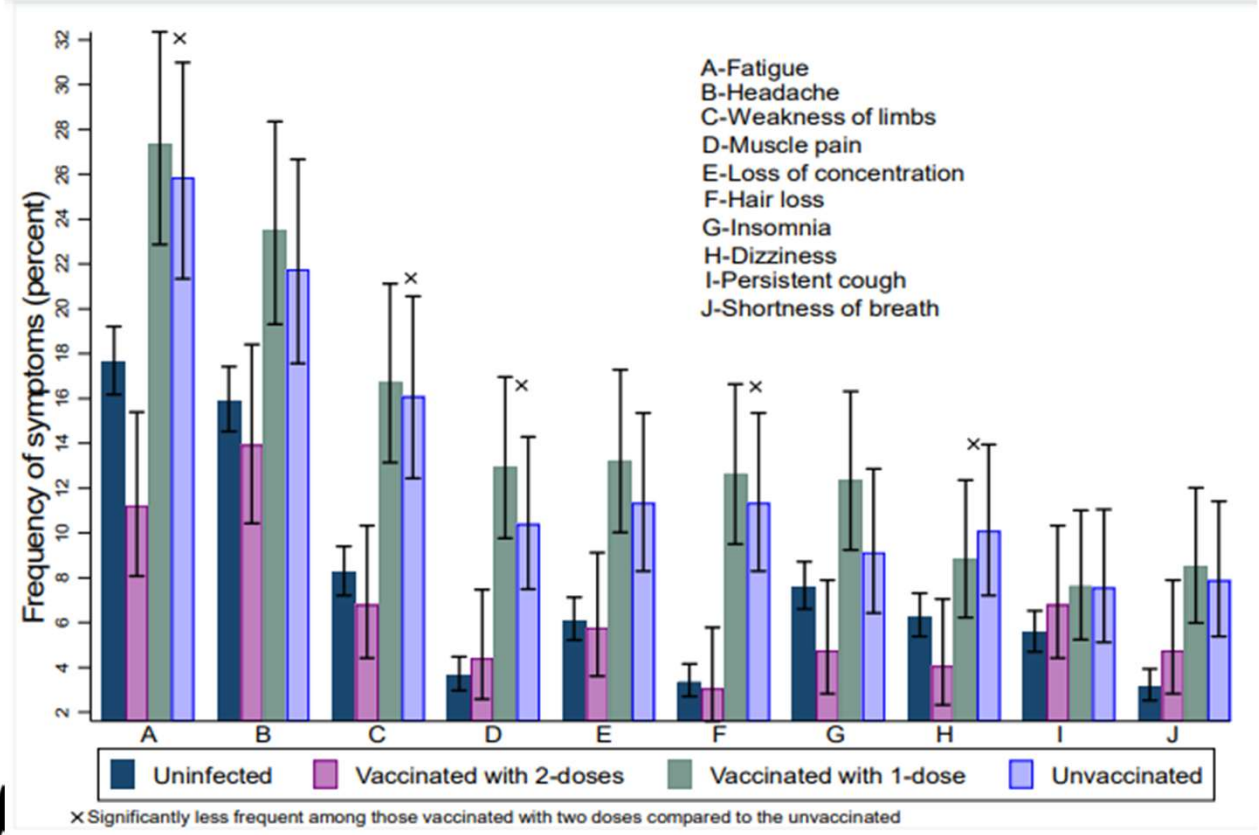
Frequency of Most Reported Long COVID Symptoms among Controls, Vaccinated and Unvaccinated: Israel, Adults

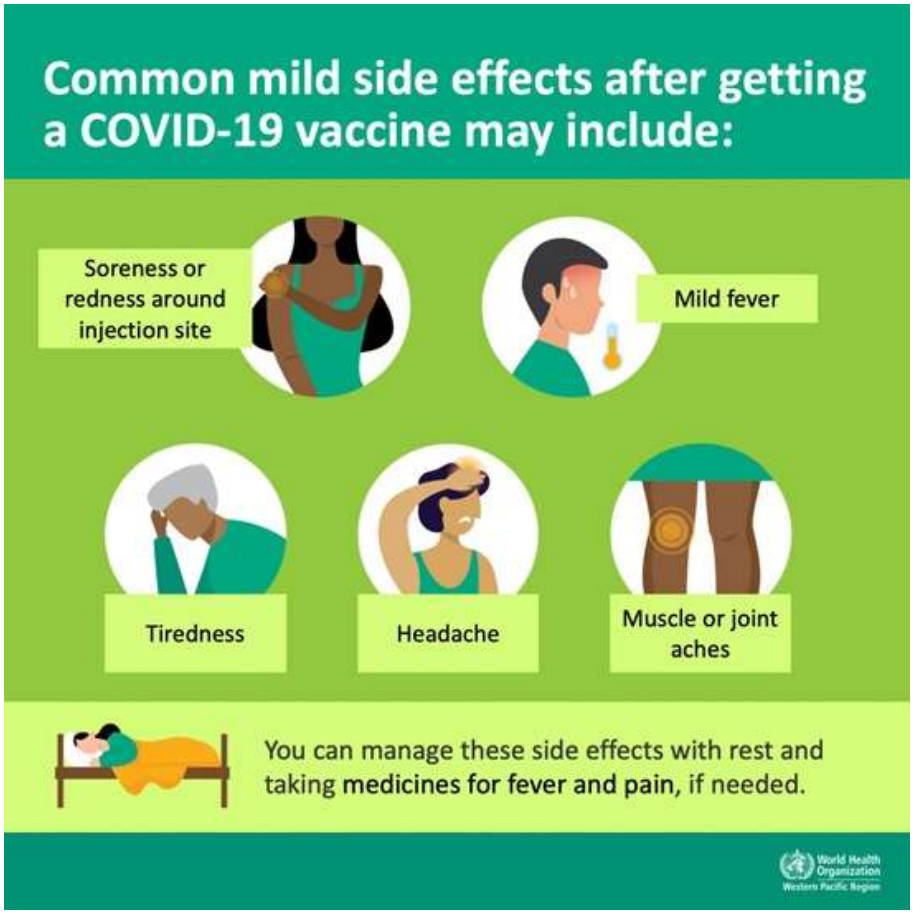


- March 2020-November 2021
  - Prior to Omicron
- Online questionnaire
- Compared vaccinated individuals with those unvaccinated and those uninfected for self-reported symptoms post-acute infection
- 951 infected and 2437 uninfected individuals
  - Of the infected, 637(67%) were vaccinated
- In addition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

Kuodi P, et al. https://www.medrxiv.org/content/10.1101/2022.01.05.22268800v2

Common Vaccine Side Effects

Symptoms last for less than 48-72 hours



https://www.who.int/westernpacific/emergencies/covid-19/information-vaccines/covid-19-vaccine-side-effects-aefis-and-safety

Myocarditis

- Myocarditis is rare
  - 12-17 y/o: 1/10,000 2nd doses for males, 1/100,000 2nd doses for females
  - 5-11 yr olds: almost not seen, 1/700,000
  - Resolves quickly, very rare to persist beyond a few weeks
  - Greatly reduced with longer interval between 1st and 2nd doses

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

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COVID-19 Update

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COVID Dashboard

Chicago's COVID-19 Risk Level is MEDIUM

Metrics			
	New Cases (per 100,000 people in last 7 days)	New COVID-19 admissions per 100,000 population (7-day total)	Proportion of staffed inpatient beds occupied by COVID-19 patients (7-day average)
	[GOAL is <200]	*[GOAL is <10]*	*[GOAL is <10%]*
City of Chicago	195	4.2	3.2%
Cook County (including City of Chicago)	259	6.9	2.2%

CDPH strongly recommends:

- Stay up to date with COVID-19 vaccines
- Wear a face mask in indoor public settings where vaccine status is not known
- Get tested if you have symptoms
- Follow all isolation and quarantine guidance, including wearing a face mask
- If you are at high risk for severe illness, talk to your healthcare provider about whether you need to wear a mask and take other precautions

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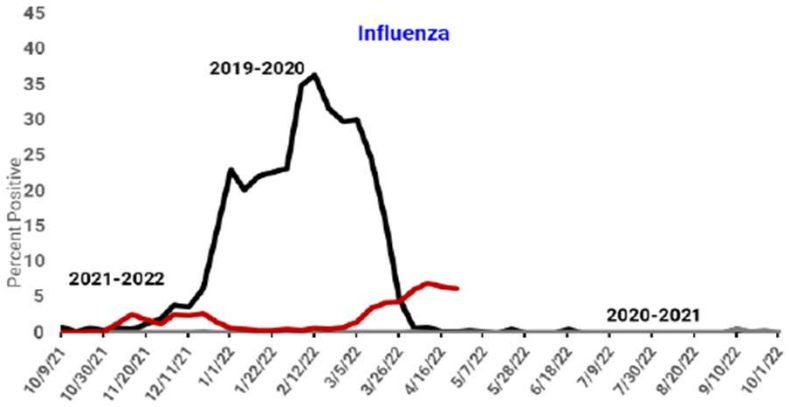
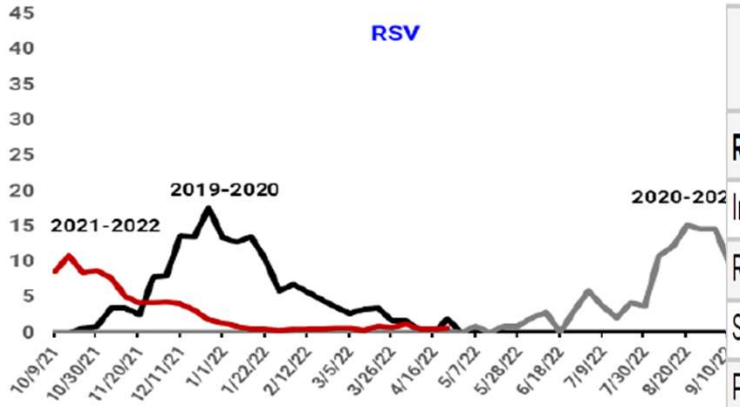
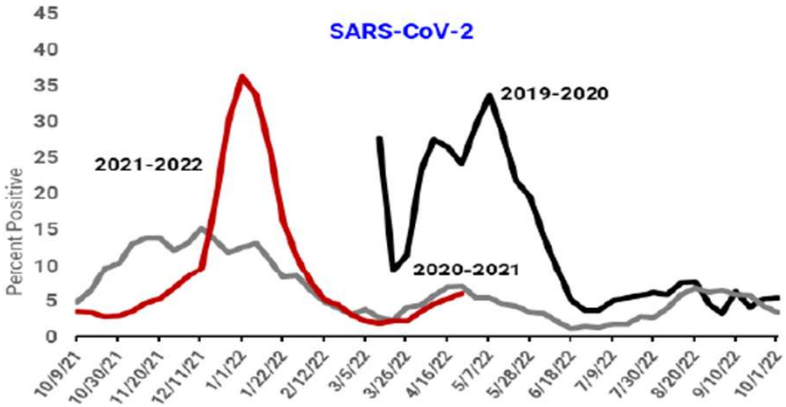
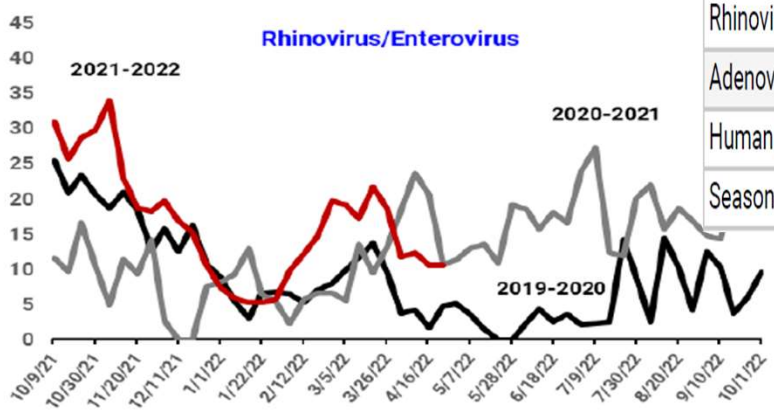
Chicago Area Data on Influenza Like Illness Surveillance









	Week Ending April 23, 2022	
Respiratory Pathogen PCR	**# Tested**	**% Positive**
Influenza*	4,607	6.2%
RSV*	3,416	<1%
SARS-CoV-2*	5,455	6.1%
Parainfluenza	1,349	1.1%
Rhinovirus/Enterovirus	857	10.6%
Adenovirus	857	3.7%
Human Metapneumovirus	857	8.9%
Seasonal Coronaviruses	1,349	6.3%

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CDPH. Chicago Influenza and Respiratory Virus Surveillance Report *Surveillance Week 16 (April 17-23, 2022)*

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