

COVID and ID Update

Grand Rounds

Prevnar 20 vaccine, COVID Boosters, COVID Vaccines for under 5, COVID treatment other than Paxlovid, Monkeypox update



Sherrill Brown, MD
Director, Infection Prevention

Topics for Grand Rounds Today

- **Pevnar 20 Roll Out**
- **COVID Boosters should be given to all eligible people 5 and over**
- **Under 5 “Tender Age” COVID Vaccines now authorized**
 - We will be getting Moderna sometime after 6/27
 - CHLA, Goodrich, Southgate and Anaheim
- **STD guidelines now published on townsquare**
- **Accessing Therapeutics other than Paxlovid for our patients**
- **Counseling patients that will be getting Paxlovid**
- **Identifying and Testing for Monkeypox**

WHO IS PREVNAR 20 (PCV 20) FOR & THE PURPOSE OF PCV 20

The Advisory Committee on Immunization Practices (ACIP) Recommends PCV 20 and PCV 15:

- ▶ For all patients 65 years of age and older.
- ▶ For patients 19- 64 years of age with certain medical conditions or risk factors.
 - ▶ E.g.: patients with Diabetes, Alcoholism, HIV Infection, Chronic Heart/Liver/Lung Disease, or Chronic Renal Failure. ***see additional conditions and risk factors slide for complete list and timing information**

PURPOSE: To reduce morbidity and mortality from pneumococcal disease by vaccinating patients who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP).

(Pfizer, 2022), (AltaMed , 2022)

PREVNAR 20 TIMING

- ▶ Patients with unknown vaccine history or have not previously received PCV13 or PPSV23.
- ▶ Patients who previously received PPSV23 at least one year prior. Yes, PCV20 overrides PPSV23.
- ▶ Patients who received PCV13 prior to age 65, they should get a PPSV23 one year later. Additionally, they should get another PPSV23 after they turn 65 at least 5 years after the last PPSV23.
- ▶ For patients who previously received PCV13 at least one year prior the 1st option is PPSV23 or PCV20 if it is unavailable .
- ▶ For patients due for PPSV23 but it is unavailable, they may get a PCV20 instead.
- ▶ One PCV20 after age 19 completes pneumococcal vaccination for patients regardless of age.

Pneumococcal Vaccine Timing

DO NOT administer PCV15 and PPSV23 at the same visit.

Age 65+ Years: All

Age 19-64 Years: Only if High-Risk**^



A. Unknown or No Prior Doses of PCV13 or PPSV23

Option A1

PCV20
Prevnar20®
(No PPSV23)

OR

Option A2

PCV15
Vaxneuvance®

≥1 year interval if:
healthy 65+, or 19+ with other risks*
Consider ≥8 week interval if:
19+ at highest-risk*

PPSV23
Pneumovax® 23

B. Previously Received PPSV23

≥1 year since PPSV23

PCV20
Prevnar20®

OR

PCV15
Vaxneuvance®

C. Previously Received PCV13

≥1 year since PCV13

PPSV23
Pneumovax® 23

OR

If PPSV23 unavailable

PCV20
Prevnar20®

D. Previously Completed Series of PCV13 and PPSV23 in Any Order

No Additional Doses Needed

(Pfizer, 2022)

PCV20 will be replacing Pneumococcal Vaccine in Adults

- **PCV 20 is a conjugate vaccine that produces longer lasting and more robust immunity for the 20 most common pneumococcal isolates that cause disease**
- **PCV20 is replacing both PCV13 and PPSV23 in adults**
- **All clinics can order PCV20 from private source and VFA to start vaccinating in July**
- **We need to use up our adult PCV13 and can continue using PPSV23 in order to complete the persons vaccine series for the next year or more**

WHAT WE NEED TO KNOW AS ALTAMED BACK OFFICE STAFF

- ▶ In April 2022 VFA removed PCV13 from their formulary and added PREVNAR 20. Pneumovax 23 (PPSV23) is currently on the VFA formulary but will eventually be phased out, around Spring 2023.
- ▶ Starting July 11, 2022 Alta Med will begin using PREVNAR 20, which is the same date the VFA window is scheduled to open.
- ▶ Prevnar13 will remain on the Alta Med formulary for patients 18 years and younger. The CDC recommends Prevnar 13 for all children younger than 2 years old and for children 2 through 18 years of age with certain medical conditions.
- ▶ **VFA does not plan to add PCV15 to their formulary.*

(Alta Med , 2022)

Pneumococcal Vaccine Timing

DO NOT administer PCV15 and PPSV23 at the same visit.

Age 65+ Years: All

Age 19-64 Years: Only if High-Risk^{*^}



A. Unknown or No Prior Doses of PCV13 or PPSV23

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OR

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healthy 65+, or 19+ with other risks^{*}

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PPSV23
Pneumovax^{*} 23

B. Previously Received PPSV23

≥ 1 year since PPSV23

PCV20
Prevnar20^{*}

OR

PCV15
Vaxneuvance^{*}

C. Previously Received PCV13

≥ 1 year since PCV13

PPSV23
Pneumovax^{*} 23

OR

If PPSV23 unavailable

PCV20
Prevnar20^{*}

D. Previously Completed Series of PCV13 and PPSV23 in Any Order

No Additional Doses Needed

AltaMed

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Rules for PCV20

- If someone never had a pneumococcal vaccine and is due for one, give them a PCV20, One and Done
- If someone never had a PCV13 and is due for one, give them a PCV20
- If someone had a PCV13 before and is due for PPSV23, give them PPSV23
- If someone gets a PCV20, they are done and don't need anything else
- If an adult is due for a PCV13 or a PPSV23 and they are not available, give them a PCV20
- If someone has only had PPSV23 and are >65, they should get a PCV20
- EPIC is flagging vaccination for those 65 and over, for people 19-64, we are working on the logic before that starts flagging

For people 65 and over

Clinical scenario for patients age 65+ only	Vaccination Options
Has not received any pneumococcal vaccine ever	1) 1 dose of PCV20* to complete series OR 2) PPSV23 now and then PCV20 1 year later to complete series
Only received PPSV23 after turning 65	1) 1 dose of PCV20 to complete series OR 2) 1 dose of PCV13 to complete series
Only received PCV13 after turning 65	1) 1 dose of PPSV23 to complete series (CDC recommended option) OR 2) 1 dose of PCV20 to complete series (Secondary option if PPSV23 is not available)
Prior to turning 65 received PPSV23	1) 1 dose of PCV20 to complete series
Prior to turning 65 has received PCV13 +/- PPSV23	Review link to CDC recommendations below. https://www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf

*PCV20 should be the preferred option

Note: AltaMed will receive the PCV20 vaccine in July

Pneumococcal vaccine timing for adults who previously received PCV13 but who have not received all recommended doses of PPSV23

The previous pneumococcal recommendations remain in effect pending further evaluation. Use the following information for guidance on the number of and interval between any remaining recommended doses of PPSV23.

Adults 65 years or older without an immunocompromising condition, cerebrospinal fluid leak, or cochlear implant



CDC recommends 1 dose of PPSV23 at age 65 years or older.**
Administer a single dose of PPSV23 at least 1 year after PCV13 was received. Their pneumococcal vaccinations are complete.

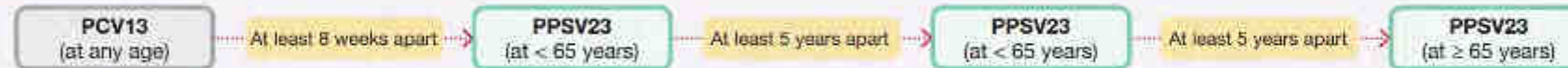
Adults 19 years or older with a cerebrospinal fluid leak or cochlear implant



CDC recommends 1 dose of PPSV23 before age 65 years and 1 dose of PPSV23** at age 65 years or older.**
Administer a single dose of PPSV23 at least 8 weeks after PCV13 was received.

- If the adult is 65 years or older, their pneumococcal vaccinations are complete.
- If the adult was younger than 65 years old when the first dose of PPSV23 was given, then administer a final dose of PPSV23 once they turn 65 years old and at least 5 years have passed since PPSV23 was first given. Their pneumococcal vaccinations are complete.

Adults 19 years or older with an immunocompromising condition



CDC recommends 2 doses of PPSV23 before age 65 years and 1 dose of PPSV23** at age 65 years or older.**
Administer a single dose of PPSV23 at least 8 weeks after PCV13 was received.

- If the patient was younger than 65 years old when the first dose of PPSV23 was given and has not turned 65 years old yet, administer a second dose of PPSV23 at least 5 years after the first dose of PPSV23. This is the last dose of PPSV23 that should be given prior to 65 years of age.
- Once the patient turns 65 years old and at least 5 years have passed since PPSV23 was last given, administer a final dose of PPSV23 to complete their pneumococcal vaccinations.

Number and timing of PPSV23 doses for patients who previously received PCV13 but who have not received all recommended doses of PPSV23, by medical condition

Underlying medical condition or other risk factor	PPSV23** at 19 through 64 years		PPSV23** at ≥ 65 years
	Recommended	Revaccination	Recommended
None	Not recommended	Not recommended	✓ At least 1 year after PCV13 dose
Alcoholism	✓ At least 1 year after PCV13 dose if PCV13 was inadvertently given [†] or given as a child	Not recommended	✓ At least 1 year after PCV13 dose and at least 5 years after any PPSV23 dose at < 65 years
Chronic heart disease [†]			
Chronic liver disease			
Chronic lung disease [‡]			
Cigarette smoking			
Diabetes mellitus			
Cochlear implant	✓ At least 8 weeks after PCV13 dose	Not recommended	✓ At least 8 weeks after PCV13 dose and at least 5 years after last PPSV23 dose at < 65 years
Cerebrospinal fluid leak			
Chronic renal failure*	✓ At least 8 weeks after PCV13 dose	✓ At least 5 years after first PPSV23 dose	✓ At least 8 weeks after PCV13 dose and at least 5 years after last PPSV23 dose at < 65 years
Congenital or acquired asplenia*			
Congenital or acquired immunodeficiency** ^{††}			
Generalized malignancy*			
HIV infection*			
Hodgkin disease*			
Iatrogenic immunosuppression** [†]			
Leukemia*			
Lymphoma*			
Multiple myeloma*			
Nephrotic syndrome*			
Sickle cell disease/other hemoglobinopathies [‡]			
Solid organ transplant [‡]			

* Considered an immunocompromising condition

[†] Includes congestive heart failure and cardiomyopathies

[‡] Includes chronic obstructive pulmonary disease, emphysema, and asthma

^{††} Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease)

[‡] Includes diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy

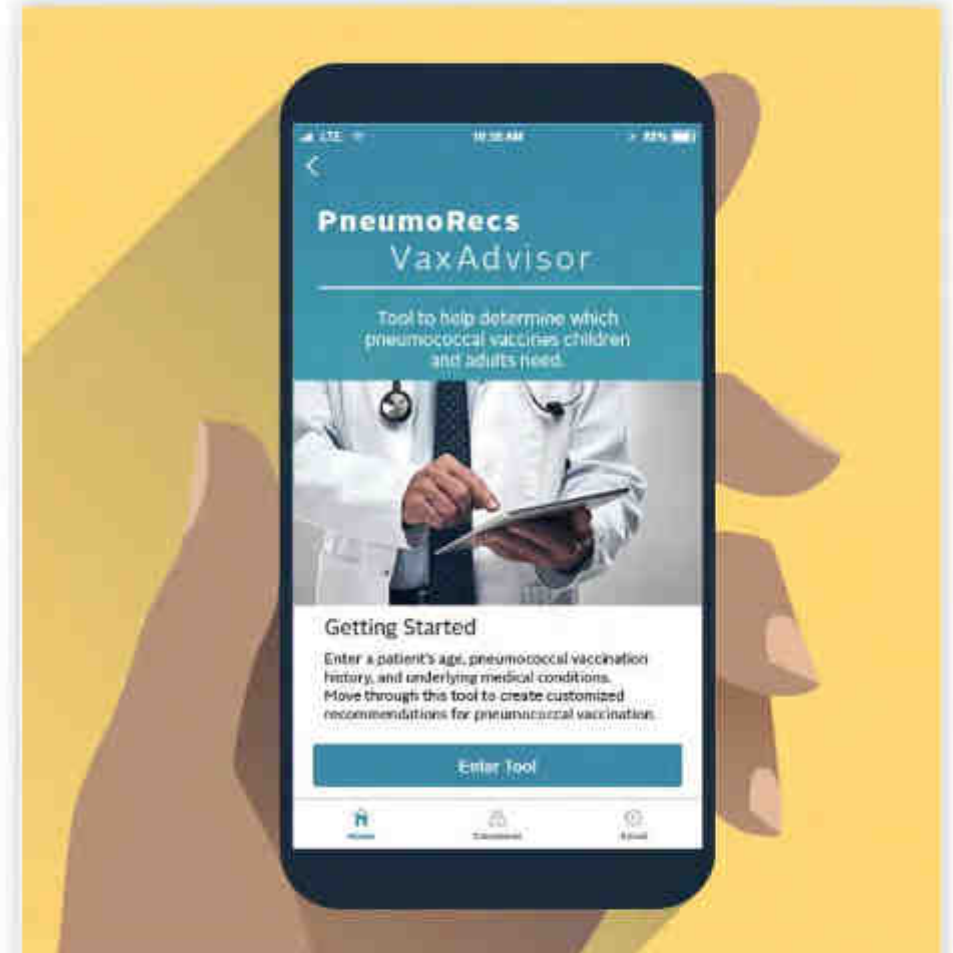
** For adults who have received PCV13 but have not completed their recommended pneumococcal vaccine series with PPSV23, one dose of PCV20 may be used if PPSV23 is not available. If PCV20 is used, their pneumococcal vaccinations are complete.

1. PCV13 was never recommended for these populations

There's an app for that!

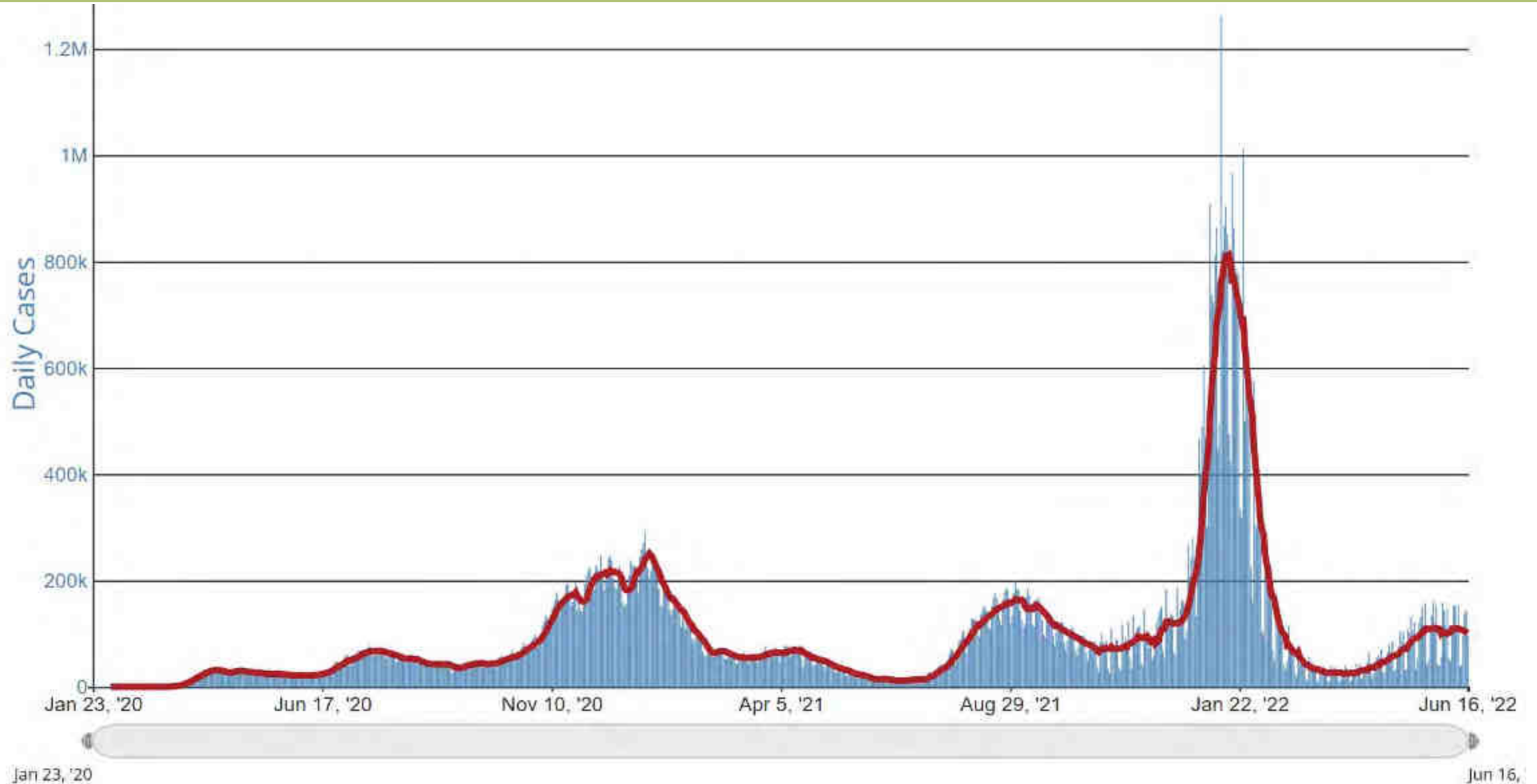
- <https://www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf>
- <https://www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html>

PneumoRecs VaxAdvisor



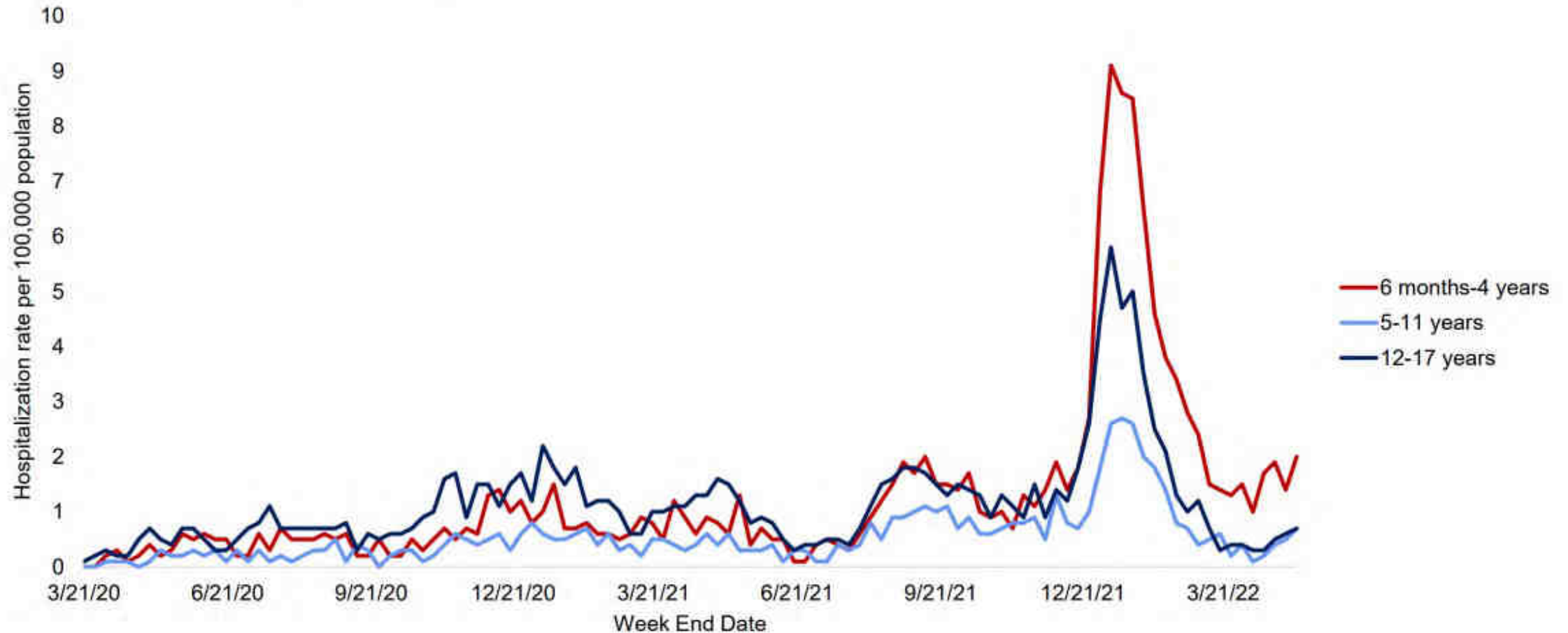
PneumoRecs VaxAdvisor is available for download on iOS and Android mobile devices.

Daily COVID Cases in the US



COVID-19-associated hospitalizations among children and adolescents ages 6 months – 17 years, COVID-NET

March 21, 2020 – May 7, 2022



Source: COVID-NET, https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html. Accessed 5/21/2022

COVID-19 was a leading cause of death among children ages 0 – 4 years

March 1, 2020 – April 30, 2022

Age group	Rank of COVID-19 among causes of death
<1 year	4
1 – 4 years	5
5 – 9 years	5
10 – 14 years	4
15 – 19 years	4

Based on death certificate data from the National Center for Health Statistics. COVID-19 based on cumulative total incidence of COVID-19 deaths from March 1, 2020-April 30, 2022.

Source: Preprint: Flaxman S, Whittaker C, Semenova E et al. Covid-19 is a leading cause of death in children and young people ages 0-19 years in the United States. medRxiv 2022.05.23.22275458; doi: <https://doi.org/10.1101/2022.05.23.22275458>

COVID-19 is a leading cause of death among infants age <1 year

March 1, 2020–April 30, 2022

Causes of Death	Crude rate per 100,000	Death (n)
1. Certain conditions originating in the perinatal period	272.1	10294
2. Congenital malformations, deformations and chromosomal abnormalities	113.7	4301
3. Accidents (unintentional injuries)	33.5	1266
4. Covid-19 (cumulative)	7.2	269
5. Diseases of heart	7.1	268

Based on death certificate data from the National Center for Health Statistics. COVID-19 based on cumulative total incidence of COVID-19 deaths from March 1, 2020-April 30, 2022.

Source: Flaxman S, Whittaker C, Semenova E et al. Covid-19 is a leading cause of death in children and young people ages 0-19 years in the United States. medRxiv 2022.05.23.22275458; doi: <https://doi.org/10.1101/2022.05.23.22275458>

COVID-19 is a leading cause of death among children ages 1–4 years

March 1, 2020–April 30, 2022

Causes of Death	Crude rate per 100,000	Death (n)
1. Accidents (unintentional injuries)	7.3	1149
2. Congenital malformations, deformations and chromosomal abnormalities	2.6	416
3. Malignant neoplasms	1.8	285
4. Assault (homicide)	1.8	284
5. Covid-19 (cumulative)	0.9	134

Based on death certificate data from the National Center for Health Statistics. COVID-19 based on cumulative total incidence of COVID-19 deaths from March 1, 2020-April 30, 2022.

Source: Flaxman S, Whittaker C, Semenova E et al. Covid-19 is a leading cause of death in children and young people ages 0-19 years in the United States. medRxiv 2022.05.23.22275458; doi: <https://doi.org/10.1101/2022.05.23.22275458>

Pediatric vaccine preventable diseases: Deaths per year in the United States prior to recommended vaccines

	Hepatitis A ¹	Meningococcal (ACWY) ²	Varicella ³	Rubella ⁴	Rotavirus ⁵	COVID-19 ⁶
Age	<20 years	11–18 years	5–9 years	All ages	<5 years	6 months – 4 years
Time period	1990–1995	2000–2004	1990–1994	1966–1968	1985–1991	Jan 2020–May 2022
Average deaths per year	3	8	16	17	20	86

¹Vogt TM, Wise ME, Bell BP, Finelli L. Declining hepatitis A mortality in the United States during the era of hepatitis A vaccination. J Infect Dis 2008; 197:1282–8.

²National Notifiable Diseases Surveillance System with additional serogroup and outcome data from Enhanced Meningococcal Disease Surveillance for 2015–2019.

³Meyer PA, Seward JF, Jumaan AO, Wharton M. Varicella mortality: trends before vaccine licensure in the United States, 1970–1994. J Infect Dis. 2000;182(2):383–390. doi:10.1086/315714

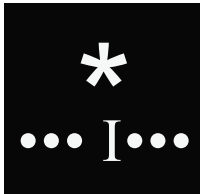
⁴Roush SW, Murphy TV. Historical comparisons of morbidity and mortality for vaccine-preventable diseases in the United States. JAMA 2007; 298:2155–63.

⁵Glass RI, Kilgore PE, Holman RC, et al. The epidemiology of rotavirus diarrhea in the United States: surveillance and estimates of disease burden. J Infect Dis. 1996 Sep;174 Suppl 1:S5–11.

⁶<https://data.cdc.gov/NCHS/Provisional-COVID-19-Deaths-Counts-by-Age-in-Years/3apk-4u4f/data>. Accessed 5/14/22

Number of children ages 6 months - 4 years needed to vaccinate to prevent 1 hospitalization: COVID-19 vs. influenza over 6 months

COVID-19



1,660 - 3,320

vaccinations needed to prevent **1 hospitalization**

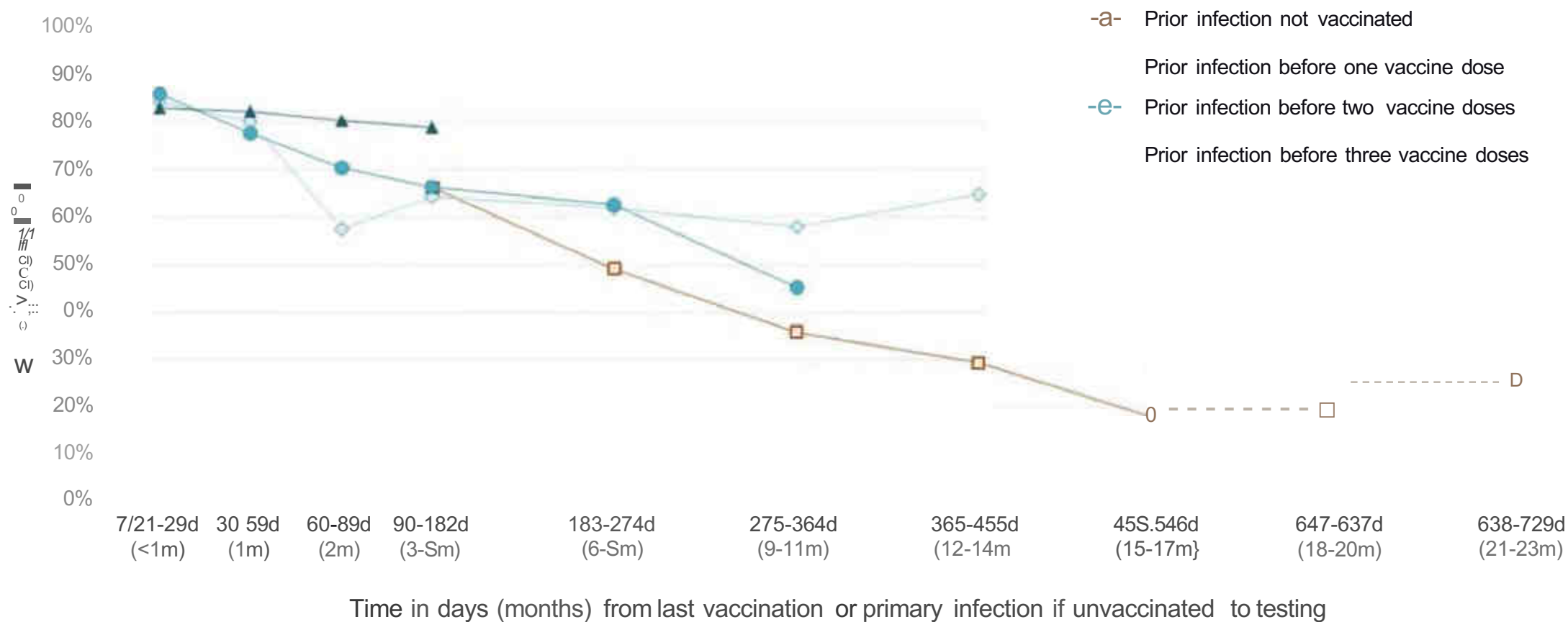
Influenza



1,030 - 6,890

vaccinations needed to prevent **1 hospitalization**

Reinfection occurs more frequently in those previously infected and not vaccinated compared to infected and vaccinated



Carazo S, Skowronski DM, Brisson M, et al. "Protection against Omicron re-infection conferred by prior heterologous SARS-CoV-2 infection, with and without mRNA vaccination" *medRxiv*, May 2022. [Protection against Omicron re-infection conferred by prior heterologous SARS-CoV-2 infection, with and without mRNA vaccination](https://doi.org/10.1101/2022.05.11.22271152) | [medRxiv](https://doi.org/10.1101/2022.05.11.22271152)

Data on hospitalizations: Plumb ID, Feldstein LR, Barkley E, et al. Effectiveness of COVID-19 mRNA Vaccination in Preventing COVID-19-Associated Hospitalization Among Adults with Previous SARS-CoV-2 Infection - United States, June 2021-February 2022. *MMWR Morb Mortal Wkly Rep* 2022;71:549-555. DOI: <http://dx.doi.org/10.15585/mmwr.mm7115e2>

1st Booster Vaccination Rates

as of June 13, 2022

CDC Strengthens Recommendations and Expands Eligibility for COVID-19 Booster Shots

Media Statement

For Immediate Release: Thursday, May 19, 2022

Contact: [Media Relations](#)

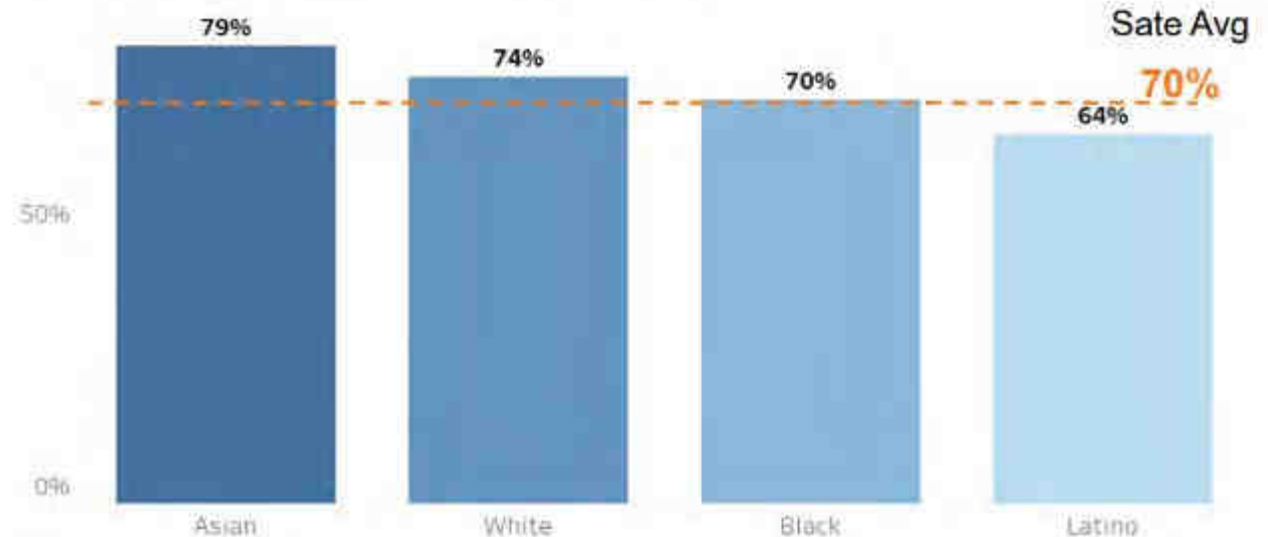
(404) 639-3285

Following today's meeting of the Advisory Committee on Immunization Practices (ACIP), CDC is expanding eligibility of COVID-19 vaccine booster doses to everyone 5 years of age and older. CDC now recommends that children ages 5 through 11 years should receive a booster shot 5 months after their initial Pfizer BioNTech vaccination series. Since the pandemic began, more than 4.8 million children ages 5 through 11 have been diagnosed with COVID-19, 15,000 have been hospitalized and, tragically, over 180 have died. As cases increase across the country, a booster dose will safely help restore and enhance protection against severe disease.

In addition, today CDC is strengthening its recommendation that those 12 and older who are immunocompromised and those 50 and older should receive a second booster dose at least 4 months after their first. Over the past month we have seen steady increases in cases, with a steep and substantial increase in hospitalizations for older Americans. While older Americans have the highest coverage of any age group of first booster doses, most older Americans received their last dose (either their primary series or their first booster dose) many months ago, leaving many who are vulnerable without the protection they may need to prevent severe disease, hospitalization, and death.

If you are eligible for a booster, you should get it.

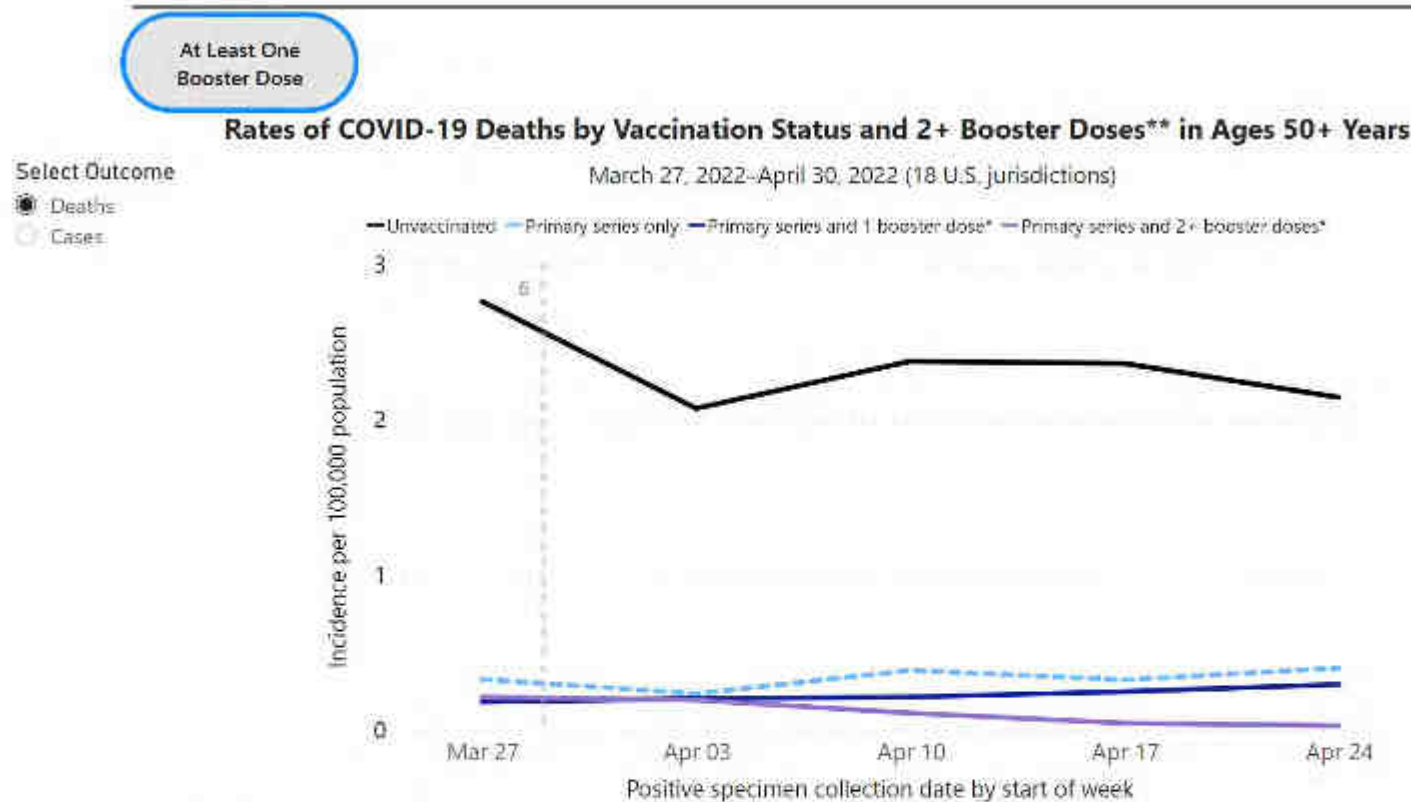
Received Booster 50+ (among booster-eligible population)



American Indian/Alaska Native 61%; Multiracial 84%; Native Hawaiian and Pacific Islander 67%; Other Race 53%.

Booster rate estimates for some groups, such as Native Hawaiian and other Pacific Islander and multi-race populations, may be unreliable. This is because of differences between how demographic data is collected through Census estimates and how information is collected at the time of vaccination.

Deaths by Vaccine Status



In April 2022, among people ages 50 years and older, unvaccinated people had:

42X

Risk of Dying from COVID-19

compared to people vaccinated with a primary series and two or more booster doses.**

Among people ages 50 years and older, vaccinated people with a primary series and one booster dose had:

4X

Risk of Dying from COVID-19

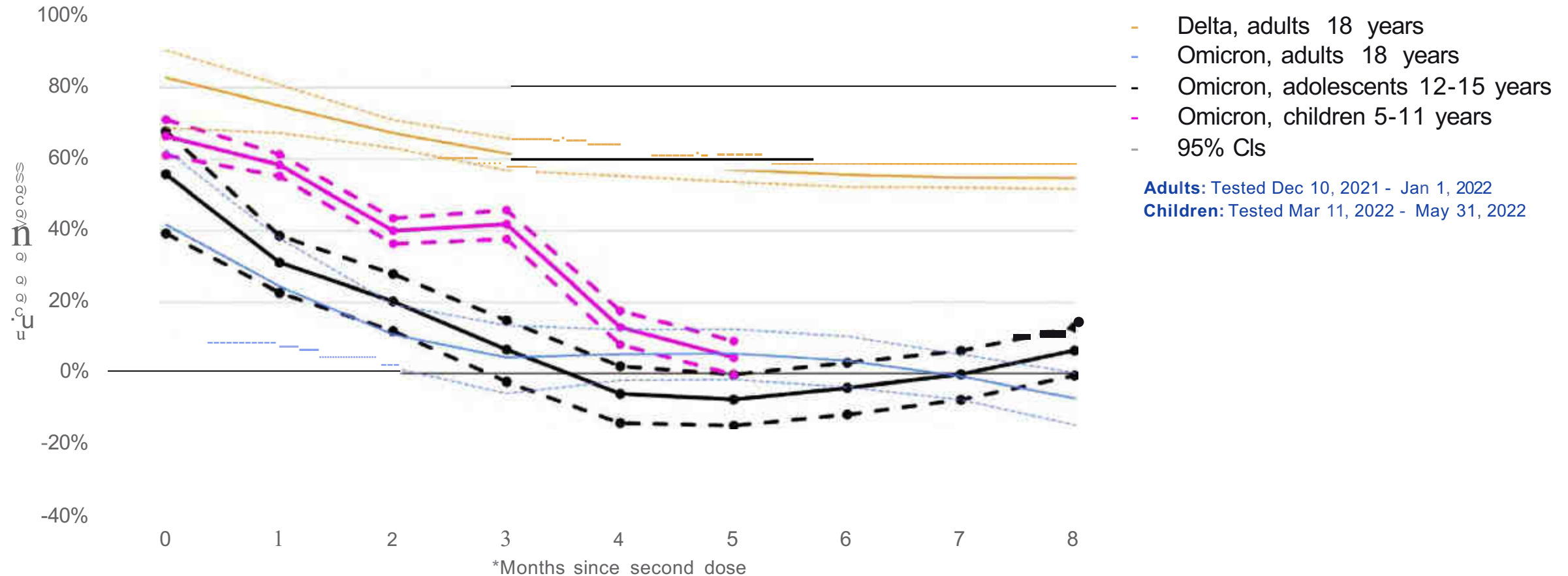
compared to people vaccinated with a primary series and two or more booster doses.**

Source: CDC COVID-19 Response, Epidemiology Task Force, Surveillance & Analytics Team, Vaccine Breakthrough Unit

AltaMed

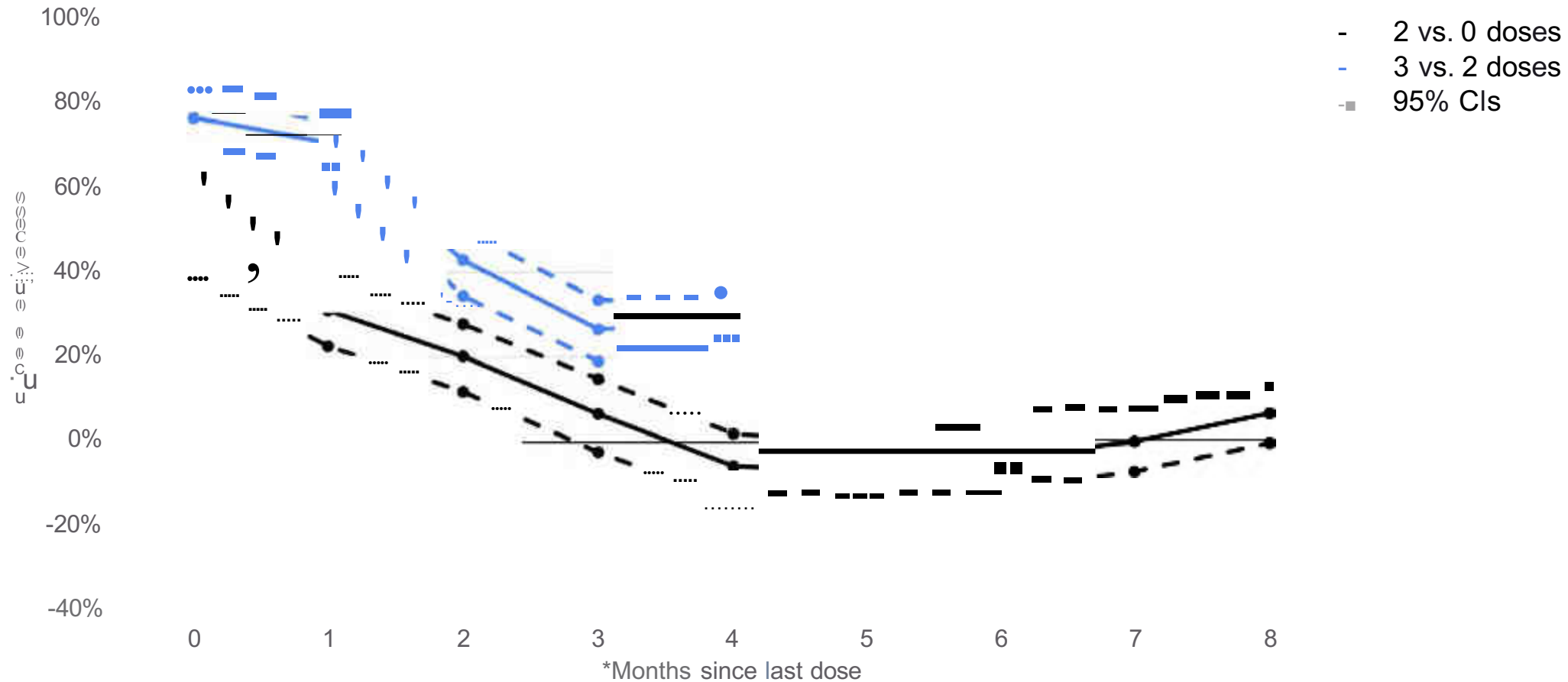
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ICATT: Pfizer-BioNTech 2-dose VE against symptomatic infection, by age group and variant



*Vaccination dose dates are collected as month and year. Month 0 represents tests in the same month as 2nd dose (at least 2 weeks after 2nd dose). For all months greater than or equal to 1 the value represents the difference between calendar month of test and calendar month of 2nd dose receipt (at least 2 weeks after 2nd dose).

ICATT: Pfizer-BioNTech 3 vs. 2-dose relative VE against symptomatic infection, age 12-15 years



*Vaccination dose dates are collected as month and year. Month 0 represents tests in the same month as 2nd dose (at least 2 weeks after 2nd dose). For all months greater than or equal to 1 the value represents the difference between calendar month of test and calendar month of 2nd dose receipt (at least 2 weeks after 2nd dose).

Post-COVID conditions may be less likely to occur after vaccine breakthrough

- While most studies on post-COVID conditions occurring after vaccine breakthrough have focused on adults, two included adolescents ^{1,2}
 - Persons who were previously vaccinated were less likely to have symptoms between 12 and 20 weeks after infection compared to persons who were unvaccinated (OR 0.22, 95% 0.20, 0.25)¹
 - Persons who were previously vaccinated had a lower occurrence of post-COVID conditions after infection compared to persons who were unvaccinated ²

1. Simon et al. Reduced Incidence of Long-COVID Symptoms | medRxiv 2022

2. Tarquet et al. Six-month sequelae of post-vaccination SARS-CoV-2 infection | medRxiv 2022

Boosters in Kids 5-11

Benefits and Harms:

Summary of the available evidence

- Waning of antibody levels seen after completion of 2-dose primary series; booster doses achieve antibody levels **higher** than after primary series
- Reactogenicity reported after a booster dose similar to what was reported after primary series
- Rates of myocarditis after primary series in children ages 5-11 years considerably **lower** than rates in adolescents; rates after booster doses likely even lower
- Receipt of primary series of COVID-19 vaccines remains important and continues to provide protection against severe COVID-19 outcomes
- Based on information from other age groups, providing booster doses can **increase protection** against both COVID-19 infection and severe disease

Summary

■ Infection

- 2-dose VE declines quickly in children and adolescents, following similar pattern to adults during Omicron predominance
- A booster dose in adolescents significantly improved VE initially, although there was waning

■ Emergency department/urgent care visits

- 2-dose VE was higher for ED/UC visits compared to infection.
 - Declined ≥ 60 days after the 2nd dose for adolescents
- A booster dose in ages 12-15 years significantly improved VE

■ Severe disease: hospitalization and MIS-C

- 2-doses provided protection for both age groups, with some waning for hospitalization in adolescents
- High VE in both age groups against MIS-C
- Not enough data to assess waning in 5-11 or impact of booster dose in 12-15

ACIP Meeting Data

- **Approval of 2 dose moderna and 3 dose Pfizer for 6mo-5yrs**
 - [PowerPoint Presentation \(cdc.gov\)](#)

GRADE

Moderna COVID-19 vaccine: Children ages 6 months-5 years

- Moderna phase 2/3 randomized controlled trial in United States
- Randomized 3:1 vaccine to saline placebo
- Analyses performed separately for 6-23 months and 2-5 years, results pooled for a combined estimate for 6 months-5 years
- Data evaluated: all eligible randomized participants who received all vaccinations as randomized within the predefined window and no other important protocol deviations
 - Data cut off: Feb 21, 2022
- Per protocol, the two co-primary endpoints for immunobridging were geometric mean ratios (GMR) & serologic response

Efficacy data also provided for symptomatic infection. Relative risks (RR) were calculated from cases in the study population. Vaccine efficacy estimates were defined as $100\% \times (1 - \text{RR})$

 - Sensitivity analyses of VE were performed to include COVID-19 cases that were identified using home testing lacking RT-PCR confirmation

Outcome: Symptomatic Lab-confirmed COVID-19

Moderna COVID-19 vaccine: Children ages 6 months–5 years

Population	Events/Vaccine (n/N)	Events/Placebo (n/N)	Vaccine efficacy ^a (95% confidence interval)
Per protocol population			
CDC case definition ^b , no evidence of prior infection, ≥14 d post dose 2	170/4105	95/1371	40.3% (23.9% , 53.3%)
CDC case definition ^b , <i>seropositive^c or seronegative</i> , ≥14 d post dose 2	181/4791	97/1597	37.8% (20.9%, 51.1%)
CDC case definition ^b , sensitivity analysis including home tests, ≥14 d post dose 2	253/4105	133/1371	36.6% (22.4%, 48.1%)
Adult trial case definition ^d , no evidence of prior infection, ≥14 d post dose 2	108/4105	61/1371	40.9% (19.6%, 56.8%)

^a Manufacturer vaccine efficacy estimates calculated using incidence rates. For GRADE, vaccine efficacy calculated from the relative risk

^b Requires at least 1 prespecified clinical symptom and a positive RT-PCR

^c Approximately 10% of participants were seropositive at baseline

^d Requires at least 2 prespecified systemic symptoms or at least 1 respiratory symptom and a positive RT-PCR

Summary of GRADE

Moderna COVID-19 vaccine: Children ages 6 months–5 years

Outcome	Importance	Design (# studies)	Findings	Evidence type
Benefits				
1. Symptomatic lab-confirmed COVID-19	Critical	RCT (1)	Moderna COVID-19 vaccine is effective in preventing symptomatic COVID-19	1
1b. Symptomatic lab-confirmed COVID-19 (immunobridging)	Critical	RCT (1)	Moderna COVID-19 vaccine is effective in preventing symptomatic COVID-19	2
2. Hospitalization due to COVID-19	Important	No studies	Data not available from any studies	ND
3. Multisystem inflammatory syndrome in children (MIS-C)	Important	No studies	Data not available from any studies	ND
4. Asymptomatic SARS-CoV-2 infection	Important	RCT (1)	The vaccine did not demonstrate efficacy in prevention of asymptomatic SARS-CoV-2 infection	3
Harms				
5. Serious adverse events	Critical	RCT (1)	0.5% of participants with SAEs among vaccinated and 0.2% among unvaccinated; certainty in the estimate was very low. Two SAEs which occurred in one participant were judged by the investigator to be related to vaccination.	4
6. Reactogenicity	Important	RCT (1)	Severe reactions were more common in vaccinated; any grade ≥ 3 reaction was reported by 7.7% of vaccinated vs. 4.1% of placebo group	1

Evidence type: 1=high; 2=moderate; 3=low; 4=very low; ND, no data

Conclusions

Moderna COVID-19 vaccine: Children ages 6 months–5 years

- Efficacy seen after two doses of Moderna COVID-19 vaccine in children ages 6 months–5 years of age consistent with real-world vaccine effectiveness in all other ages during Omicron predominance
- Antibody levels after 2 doses in children ages 6 months–5 years produces similar antibody levels after 2 doses in individuals ages 18–25 years
- Reactogenicity post-vaccine consistent with other recommended vaccines in this age group

GRADE

Pfizer-BioNTech COVID-19 vaccine: Children ages 6 months–4 years

- Pfizer-BioNTech phase 2/3 RCT conducted in United States, Finland, Poland, and Spain
- Randomized **2:1** vaccine to saline placebo
- Analyses performed separately for 6-23 months and 2-4 years, results pooled for a combined estimate for 6 months-4 years
- Interval between Dose 1 and Dose 2 of 21 days
- Interval between Dose 2 and Dose 3 varied
 - Ages 6–23 months: Median interval of **16 weeks**
 - Ages 2–4 years: Median interval of **11 weeks**
- Data evaluated: direct efficacy and immunobridging (per protocol co-primary endpoint) on all eligible randomized participants who received all vaccinations as randomized and no other important protocol deviations
 - Data cut-off: April 29, 2022 median follow-up after dose 3: 1.3 months
 - Relative risks (RR) were calculated from cases in the study population. Vaccine efficacy estimates were defined as $100\% \times (1 - \text{RR})$

RCT= randomized controlled trial

Outcome: Symptomatic Lab-confirmed COVID-19

Pfizer COVID-19 vaccine: Children ages 6 months–4 years

Population	Events/Vaccine (n/N)	Events/Placebo (n/N)	Vaccine efficacy ^a (95% confidence interval)
Evaluable efficacy^b			
With or without^c evidence of prior infection (≥7 d post Dose 3), ages 6–23 months	1/386	2/184	76.2 (-161.2, 97.8)
With or without^c evidence of prior infection (≥7 d post Dose 3), ages 2–4 years	2/606	5/280	81.5 (5.3, 96.4)
With or without^c evidence of prior infection (≥7 d post Dose 3), ages 6mo–4 years	3/992	7/464	80.0 (22.8, 94.8)

^aManufacturer vaccine efficacy estimates calculated using incidence rates. For GRADE, vaccine efficacy calculated from the relative risk

^bAll eligible randomized participants who received all vaccinations as randomized and had no other important protocol deviations as determined by the investigator

^cApproximately 30% of participants were seropositive at baseline

Outcome: Symptomatic Lab-confirmed COVID-19, dose 2 efficacy

Pfizer COVID-19 vaccine: Children ages 6 months–4 years

Population	Events/Vaccine (n/N)	Events/Placebo (n/N)	Vaccine efficacy ^a (95% confidence interval)
6–23 months			
With or without evidence of prior infection, ≥7 Days after Dose 2 to before Dose 3, ages 6–23 months^b	80/1178	48/598	15.4 (-19.4, 40.0)
2–4 years			
With or without evidence of prior infection, ≥7 Days after Dose 2 to before Dose 3, ages 2–4 years^c	100/1835	74/915	32.6 (10.0, 49.6)

^aManufacturer vaccine efficacy estimates calculated using incidence rates. For GRADE, vaccine efficacy calculated from the relative risk

^bMet non-inferiority criteria for immunobridging to 16–25-year-olds

^cDid not meet non-inferiority criteria for immunobridging to 16–25-year-olds

Summary of GRADE

Pfizer COVID-19 vaccine: Children ages 6 months–4 years

Outcome	Importance	Design (# studies)	Findings	Evidence type
Benefits				
1a. Symptomatic lab-confirmed COVID-19 (efficacy)	Critical	RCT (1)	Pfizer-BioNTech COVID-19 vaccine is effective in preventing symptomatic COVID-19; certainty in the estimate was very low	4
1b. Symptomatic lab-confirmed COVID-19 (immunobridging)	Critical	RCT (1)	Pfizer-BioNTech COVID-19 vaccine is effective in preventing symptomatic COVID-19	2
2. Hospitalization due to COVID-19	Important	No studies	Data not available from any studies	ND
3. Multisystem inflammatory syndrome in children (MIS-C)	Important	No studies	Data not available from any studies	ND
4. Asymptomatic SARS-CoV-2 infection	Important	No studies	Data not available from any studies	ND
Harms				
5. Serious adverse events	Critical	RCT (1)	1.0% of participants with SAEs among vaccinated and 1.5% among unvaccinated; certainty in the estimate was very low. 2 SAEs in 1 participant in the vaccine arm were judged to be related to vaccination.	4
6. Reactogenicity	Important	RCT (1)	Severe reactions were slightly more common in vaccinated; any grade ≥ 3 reaction was reported by 4.3% of vaccinated vs. 3.6% of placebo group	2

Evidence type: 1=high; 2=moderate; 3=low; 4=very low; ND, no data

Conclusions

Pfizer-BioNTech COVID-19 vaccine: Children ages 6 months-4 years

- Antibody levels after 3 doses in children ages 6 months-4 years produces similar antibody levels after 2 doses in individuals ages 16-24 years
- Reactogenicity post-vaccine similar after each of the 3 vaccine doses, and similar to reactions seen in placebo recipients
- Efficacy estimates difficult to interpret given small numbers and limited follow-up time
 - Impact of **longer interval** in the trial between dose 2 and dose 3 on efficacy, reactogenicity or safety are unknown

Primary Series Doses for Infant/Toddler:

- **Pfizer** (3 micrograms): 3 doses for ages 6 months to under 5 years.



- **Moderna** (25 micrograms): 2 doses for ages 6 months to under 6 years.



AltaMed Roll Out for Tender Age Vaccines

- Based on efficacy and no need to dilute moderna vaccine, we have made the decision to order Moderna vaccines for peds less than 5
- Standing order and materials are being produced in prep for roll out
- Vaccines expected to arrive week of june 27th but there seems to be a backlog in order deliveries.
- Vial label may be different than expected (age range, storage range).
- Must refer to most up to date EUA prior to giving vaccines.



VRBPAC votes to support Novavax EUA

- On June 7, 2022, the Vaccines and Related Biological Products Advisory Committee (VRBPAC) voted to recommend the Emergency Use Authorization of the Novavax COVID-19 vaccine 2-dose primary series for persons ≥ 18 years
 - FDA approval pending
 - No current federal government orders for distribution
- CDC/ACIP and Western States Scientific Safety Review Workgroup (WSSSRW) - TBD

Sexually Transmitted Infection Clinician Guide

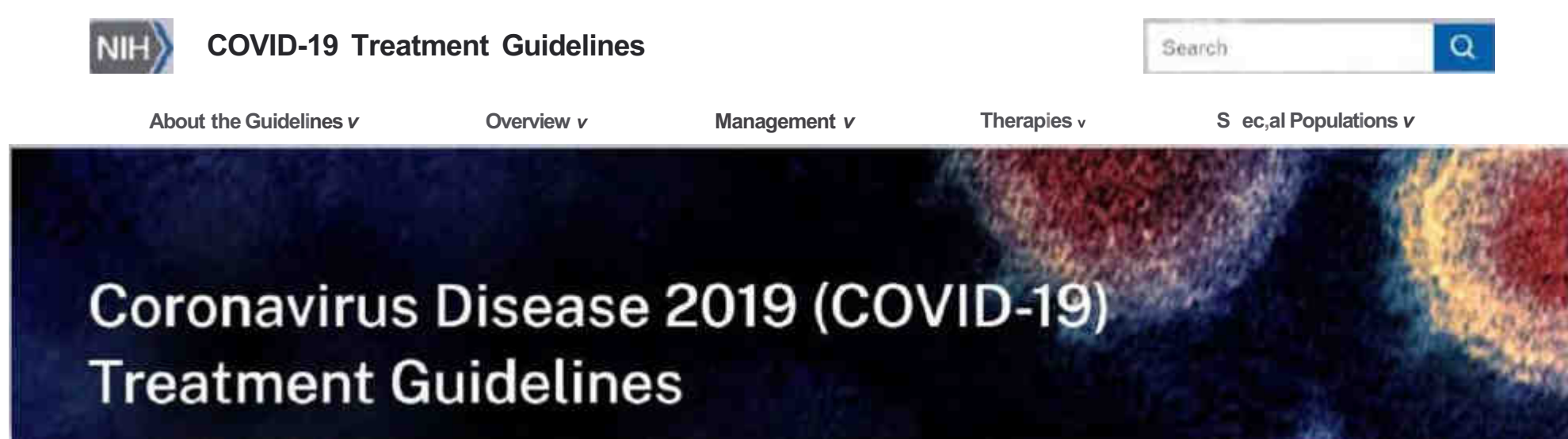
2022

Sexually Transmitted Infection Clinical Practice Guidelines

THE ALTAMED INSTITUTE FOR HEALTH EQUITY • MEDICAL EDUCATION

Drug	Dosing	Duration	Time from Symptom Onset	Specific issues
Nirmatrelvir (N) + ritonavir (RTV)	eGFR $\geq$60mL/min: N 300 mg with RTV 100 gm po bid eGFR $\geq$30 to <60 mL/min Nirmatrelvir 150 mg with RTV 100 mg po bid	5 days	$\leq$ 5 days	• DDIs • Not recommended with Child-Pugh Class C
Remdesivir (RDV)	RDV 200 mg IV F/B 100 mg IV daily	Day 1 Day 2, 3	$\leq$ 7 days	• Infusion over 30-120 min • Infusions over 3 consecutive days
Bebtelovimab (BEB)	BEB 175 mg IV	Day 1	$\leq$ 7 days	• Administer $\geq$30 seconds • No clinical endpoint data
Molnupiravir (MOL)	MOL 800 mg po bid	5 days	$\leq$ 5 days	• Potentially less efficacious than other options • Safety concerns

Nirmatrelvir plus Ritonavir Drug-Drug Interactions



<https://covid19treatmentguidelines.nih.gov/therapies/antiviral-therapy/ritonavir-boosted-nirmatrelvir--paxlovid-/paxlovid-drug-drug-interactions/>



<https://covid19-druginteractions.org/checker>

Adjust Concomitant Medication Dose and Monitor for Adverse Effects.

Consult the Liverpool COVID-19 Drug Interactions website or the Ontario COVID-19 Science Advisory Table for specific dosing recommendations. If the dose of the concomitant medication cannot be adjusted, withhold the medication (if clinically appropriate) or use an alternative concomitant medication or COVID-19 therapy.

Temporarily Withhold Concomitant Medication, If Clinically Appropriate

With hold these medications ions during ritonavir-boosted nirmatrelvir treatment and for at least 2-3 days after treatment completion. They may need to be withheld for longer if the patient is elderly or the medication has a long half- life. If withholding is not clinically appropriate, use an alternative concomitant medication or COVID-19 therapy.

Prescribe Alternative COVID-19 Therapy.

For these medications, management strategies are not possible or feasible, or the risks outweigh the potential benefits.

How to counsel patients regarding Paxlovid?

- 1. Ask about all possible meds they are taking to look for interactions.**
- 2. Tell them to hold or adjust other meds if needed after checking the interaction checker.**
- 3. Discuss the possible nausea, vomiting, diarrhea, stomach ache side effects of possible paxlovid and give them anticipatory guidance.**
 1. Take with food if tolerated.
 2. Anti-nausea medication
 3. Anti-diarrhea meds if needed.
- 4. Rarely symptoms can improve with paxlovid and then get worse again after stopping treatment.**
 1. Retake antigen test and if positive, isolate another 5 days from when symptoms got worse again.

If unable to take Paxlovid

- **Patients needing Remdesivir should go to the nearest hospital that provides this type of infusion.**
- **DPH Call Center at 1-833-540-0473 may have additional information.**
- **Follow MAB referral process for betelovimab**
- **Also consider molnupirivir if benefits outweigh risks.**

Updated Case-finding Guidance: Monkeypox Outbreak—United States, 2022

Summary

Since May 2022, monkeypox cases, which have historically been rare in the United States, have been identified in 18 states and territories among both persons returning from international travel and their close contacts domestically. Globally, more than 1,600 cases have been reported from more than 30 countries; the case count continues to rise daily. In the United States, evidence of person-to-person disease transmission in multiple states and reports of clinical cases with some uncharacteristic features have raised concern that some cases are not being recognized and tested.

Monkeypox clinical features



- Incubation period: 7-14 days (range 4 to 21 days)
- Infectivity: begins with symptom onset and lasts until all scabs fall off, new skin grown in
- Classical signs/symptoms
 - Classical: 1-3-day prodrome of fever, headache, fatigue, myalgias, lymphadenopathy → skin lesions
 - Classical: enanthem → macules → papules → vesicles → pustules → crusts; 10-100s lesions; palms/soles on 75%
 - Bacterial superinfection, genital lesions common in endemic cases
 - Severe end of spectrum: sepsis, pneumonia, encephalitis
 - Highly immunocompromised patients (advanced HIV), young children, pregnant women prone to more severe illness
- This outbreak: **atypical is the new typical**
 - Less virulent of two clades (mortality rate $\leq 1\%$)
 - Prodrome may be mild/nonexistent
 - Skin lesions may be few and isolated to genital, groin, perianal, rectal areas
 - Look for mimics of STIs, and for subtle, even solitary lesions
- **As soon as a case is suspected: Isolate, contact public health**

zoom

Monkeypox skin lesions (UK cases 2018-



Monkeypox skin lesions from current out



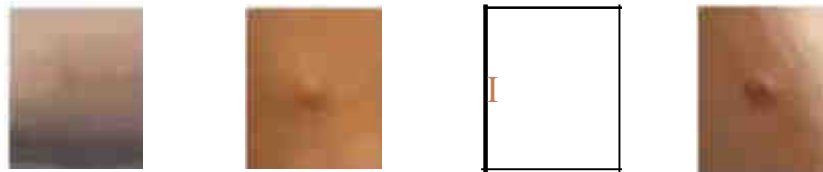
A. Anal lesions



B. Genital lesions



C. Skin lesions



5

6

7

11

Days from symptom onset

A. Genital area with rash, crusted monkeypox and hand with pustule



B. Hand



C. Shoulder area



Antinori A, et al. Epidemiological, clinical and virological characteristics of four cases of monkeypox support transmission through sexual contact, Italy, May 2022. Euro Surveill 2022 Jun;27(22)

Hammerschlag Y, et al. Monkeypox infection presenting as genital rash, Australia, May 2022. Euro Surveill 2022 Jun;27(22)

Comparison of STI Skin Rashes with Monkeypox

Type of Infection	Incubation Period	Description
Secondary Syphilis 	Can range from 10 to 90 days	Can appear when the primary chancre (ie, painless ulcer) is healing or several weeks after the chancre heals. Most commonly appears as maculopapular rash on trunk, palms and soles. May be accompanied by mild constitutional symptoms. Usually does not cause itching. Tends to have more of a peeling appearance, not nodular. Other common secondary syphilis presentations to look for: 1) Condyloma lata which are large, raised, gray or white lesions that develop in warm, moist areas like the mouth, underarm or groin/perianal region, 2) mucus patches, and 3) alopecia.
Disseminated Gonococcal Infection 	Not specified	The rash typically has a maculopapular, pustular, petechial , or necrotic appearance and usually occurs in the distal extremities (limbs, hands, and feet). Rarely nodular.
Genital Herpes 	The average incubation period for an initial herpes infection is 4 days (range, 2 to 12) after exposure	Herpes lesions typically appear as one or more vesicles, or small blisters, on or around the genitals, rectum or mouth. Mostly commonly presents in grouped vesicles (e.g, bunch of grapes). Often described as "dew on a rose petal." The vesicles break and leave painful ulcers that may take two to four weeks to heal after the initial herpes infection. Can present on buttocks and be confused with Shingles.
Molluscum Contagiosum 	Two weeks to six months	The lesions, known as Mollusca, are small, raised, and usually white, pink, or flesh-colored with a dimple or pit in the center. They often have a pearly appearance. They're usually smooth and firm. In most people, the lesions range from about the size of a pinhead to as large as a pencil eraser (2 to 5 millimeters in diameter). They may be asymptomatic or become itchy and irritated. Molluscum contagiosum is a self-limited infection; the papules usually disappear spontaneously within 6 to 12 months but may take as long as 4 years to resolve.
Monkeypox 	On average 7-14 days	The evolution of lesions progresses through four stages—macular, papular, vesicular, to pustular—before scabbing over and resolving. Lesions are well circumscribed, deep seated, and often develop umbilication (resembles a dot on the top of the lesion), they are relatively the same size and same stage of development on a single site of the body. Fever may occur before rash, and lymphadenopathy is common. Lesions are often described as painful until the healing phase when they become itchy (crusts). Rash is centrifugal (more lesions on extremities, face) and can appear on palms and soles. May present only in genital area; can present as proctitis as well.

Case Features

Clinical and laboratory classification	
Suspected	New characteristic rash* OR
	Meets one of the epidemiologic criteria and has high clinical suspicion† for monkeypox.
Epidemiologic classification	
Within 21 days of illness onset:	Reports having contact with a person or persons with a similar appearing rash or with a person who has received a diagnosis of confirmed or probable monkeypox OR
	Had close or intimate in-person contact with persons in a social network experiencing monkeypox infections. This includes MSM who meet partners through an online website, digital application ("app"), or social event (e.g., a bar or party) OR
	Traveled, within 21 days of illness onset outside the United States to a country with confirmed cases of monkeypox or where <i>Monkeypox virus</i> is endemic OR
	Had contact with a dead or live wild animal or exotic pet that is an African endemic species, or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.)
Exclusions	
A case might be excluded as a suspected, probable or confirmed case if:	An alternative diagnosis* can fully explain the illness OR
	A person with symptoms consistent with monkeypox does not develop a rash within 5 days of illness onset OR
	A case where high-quality specimens do not demonstrate the presence of <i>Orthopoxvirus</i> or <i>Monkeypox virus</i> or antibodies to <i>Orthopoxvirus</i>

What's different about this monkeypox?

- Sometimes people develop the rash without the flu like illness before.
- Sometimes the rash is in a very small easy to miss location like the genital area. Have patient get undressed if they are complaining of rash and see all skin/inside mouth.
- Rash can be painful itchy nodules.
- Can go through phases (macule, papule, vesicle, pustule, nodule, umbilicated nodule, crusts, scab)
- Easy to mix up with other rashes. Need to put the full picture together, rash/bumps + epidemiologic risk.

What to Do?

1. **Identify a potential case, ask about new rashes.**
2. **If someone has a new flu-like illness, ask if they may have been around someone with Monkeypox or a new rash within the last 21 days.**
3. **If yes, isolate these people.**
4. **Wear full PPE (gown, gloves, N95 and face shield) when seeing these patients. Document who goes in and out.**
5. **If you are concerned about MonkeyPox, call Darlene-Dickens Jeffers or Dr. Brown**
6. **See the email I sent out Thu 6/2/2022 2:42 PM.**
7. **We will talk over the case with you to see if you need to call public health.**
8. **If needing collect samples see next slide.**

Sample Collection

Only do this if instructed.

- 1. Fill out form from public health.**
- 2. Keep patient in isolation for specimen collection.**
- 3. Collect paired specimens**
- 4. Use a dacron or synthetic tipped swab and place the two swabs +/- scabs in a sterile vial.**
- 5. Use only the swabs, not the vial that comes with the swabs for now.**
- 6. Label appropriately.**
- 7. Don't aerosolize anything.**





Prevention at home

- Considerations for home isolation for confirmed or potential case
 - Pediatric vs adult
 - Additional unexposed persons or pets in home
 - The nature and extent of lesions
- Isolation at home
 - Do not leave home except for medical appointments
 - Cover lesions as much as possible
 - Should stay in room, especially if unable to cover all lesions
 - Unexposed people should only visit if essential
 - Household members should limit contact with patient



Prevention at home, continued

- PPE
 - Patient should wear surgical mask, especially with respiratory symptoms, sore throat.
 - Disposable gloves should be used when touching lesions
 - Skin lesions should be covered as much as possible (long sleeve clothing, bandages)
- Frequent hand hygiene
- Laundry with warm water and typical detergent (bleach not necessary)
 - Soiled laundry should be handled with PPE
- Eating utensils should not be shared and may be cleaned in normal fashion
- Contaminated surfaces may be disinfected with household disinfectants

Exposure Risk	High Risk	Intermediate Risk	Low Risk	No Risk
Definition of monkeypox exposure	1. Unprotected contact w body fluids or lesions 2. In patient room within 6 feet during aerosol-generating procedures without N95 and eye protection	1. Within 6 feet for 3 hours or more without surgical mask 2. Clothing came into contact with lesions	1. Entered room without eye protection 2. Wore appropriate PPE (at least mask) for all contact 3. Within 6 feet for less than 3 hours without wearing a surgical mask	
Monitoring	Yes	Yes	Yes	no
Post-exposure prophylaxis	Recommended	Discuss risk/benefit with MD	No	no

Monkeypox testing, PEP, treatment



- Testing- Lesion fluid from ≥ 2 sites (in duplicate) for orthopoxvirus PCR to state lab, then confirmatory MPX sequencing at CDC
 - PEP with vaccinia virus vaccines may be offered through CDC to high and intermediate risk contacts
 - Within 4 days of exposure, can prevent infection; after 4 days, can modify infection
 - ACAM2000: 2nd gen version of older, replicating, reactogenic vaccinia virus
 - Jynneos: 3rd gen, replication-deficient modified vaccinia Ankara (**MVA**), safer and studied in HIV-infected persons $CD4 \geq 200$.
 - Treatment is largely supportive care
 - Antiviral (tecovirimat), available through CDC under eIND, can be used for severe cases/vulnerable hosts
 - **Awareness and sensitivity, avoidance of stigma izing, collaborat-on with public health**
-





Post-exposure prophylaxis for Monkeypox

- CDC recommends that the vaccine be given within 4 days from the date of exposure in order to prevent onset of the disease.
- If given between 4–14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease.
- 2 vaccines available with 85% efficacy
 - ACAM 2000
 - Live Vaccinia virus inoculated onto the surface of the skin → lesion at site of the lesion (take).
 - Can potentially spread to other sites or other people if contact with the take.
 - Considered vaccinated after 28 days
 - Jynneos
 - Live, replication-deficient vaccine given SubQ
 - No take, no transmission potential to others
 - 2 doses 4 weeks apart
 - Considered vaccinated 2 weeks after last dose

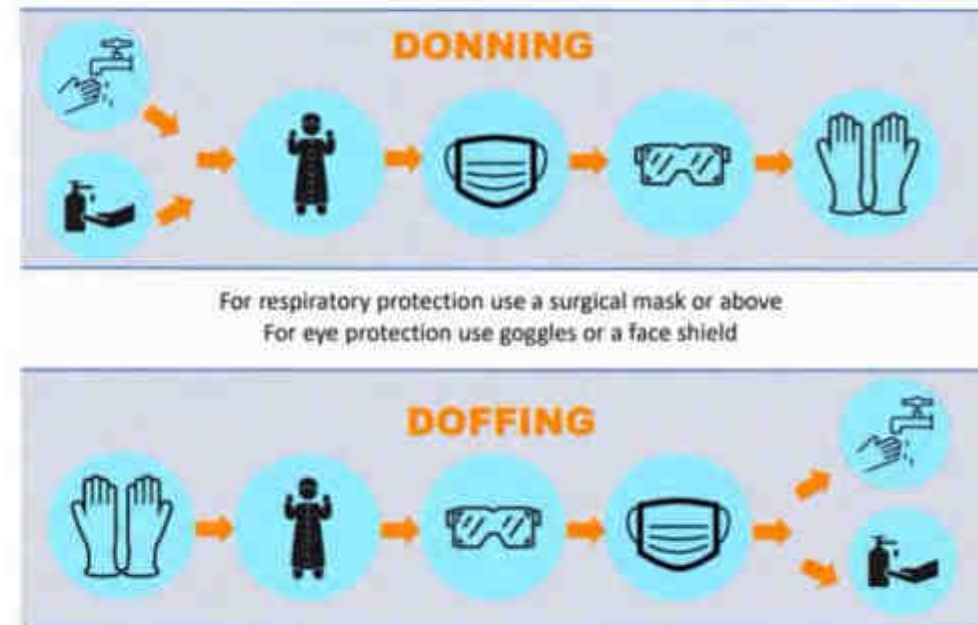
Treatment of Monkeypox

- Cidofovir & Brincidofovir
 - In-vitro and animal studies suggest some efficacy
 - Human experience limited vs. monkeypox
- Tecovirimat
 - In-vitro and animal studies suggest some efficacy
 - Human experience limited vs. monkeypox
 - Available through IND
- Vaccinia Immune Globulin
 - In-vitro and animal studies suggest some efficacy
 - Human experience limited vs. monkeypox
 - Available through IND
 - May be used for exposed, immunocompromised people who cannot receive vaccine

Infection Control Isolation Precautions for Healthcare Facility

Immediate Actions Facility should take:

- Isolation: Put patient in private room
- Negative pressure room if available
- Keep door closed
- Standard, contact and droplet precautions
- N95, eye protection, gloves, and gown for all staff entering room
- Surgical mask and gown for patient when outside of negative pressure room
- Documentation of staff who went into the room



Some recommended references



CDC MPX Website: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/index.html>

Duque et al, Portugal: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2022.27.22.2200424>

Vivancos et al, UK: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2022.27.22.2200422>

Antoniri et al, Italy: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2022.27.22.2200421>

Hammerschlag et al, Australia: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2022.27.22.2200411>

Minhaj et al, US MMWR June 3, 2022: <http://dx.doi.org/10.15585/mmwr.mm7123e1>

Vaughan et al, UK occupational case in HCW: https://wwwnc.cdc.gov/eid/article/26/4/19-1164_article

Ogoina et al, Nigerian MPX case series preceding this outbreak:
<https://academic.oup.com/cid/article/71/8/e210/5734993>

Adler et al, UK MPX case series preceding this outbreak:
[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(22\)00228-6/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00228-6/fulltext)

CDC COCA Call: https://emergency.cdc.gov/coca/calls/2022/callinfo_052422.asp



Key Messages

- The LA County Health Officer Isolation and Quarantine Orders for the general public were recently updated. They align with the California Department of Public Health (CDPH) Isolation and Quarantine of the General Public.
- The isolation requirements of COVID-19 cases, the definition of a close contact, and the quarantine requirements of close contacts are different from those recommended by the Centers for Disease Control and Prevention. Significant differences are the following:
 - **A person infected with COVID-19 (case) *must* have a negative COVID-19 test collected on or after Day 5 to end isolation on Day 6-Day 10.** If the case does not test or if their test remains positive, they are required to continue to isolate at least through Day 10. See *Isolation for Persons with COVID-19* below.
 - **Close contacts in the general public do not need to quarantine as long as they remain asymptomatic, get tested between Day 3-Day 5, and wear a mask through Day 10 of their last exposure with the infectious case.** See *Close Contacts-General Public* below. Restrictions or exclusions from work or other settings may still apply or be required by their employer.
 - **A close contact in the general public is any person who shared the same indoor airspace** with someone with COVID-19 for a total of 15 minutes or more over a 24-hour period while the case was infectious.
- Healthcare providers should refer to the LAC DPH Provider Isolation and Quarantine Guidelines which provide more detailed information on the management of cases and contacts and include quick links to patient resources such as isolation instructions and instructions for close contacts.

Updated Isolation And Quarantine for General Public

Scenario	Isolation Duration	Follow up test	Isolation Ends
Positive Covid Test	Isolate for 5 days	Antigen test on Day 5 or after. If unable to test or choose not to continue Isolation for 10 days	If Neg Ag test- Yes <u>Must</u> wear well-fitting mask for next 5 days around others (10 total days)
Negative Covid Test & Symptoms	Isolate until symptoms improved and Fever Free for 24 hours.	Home Antigen test on Day 5 or after. If unable to test or choose not to continue Isolation for 10 days	If Neg Ag test- Yes <u>Must</u> wear well-fitting mask for next 5 days around others (10 total days)
Exposure to someone with Covid-19 Regardless of Vaccine Status	No Quarantine Isolate only if you develop symptoms Wear well-fitting mask around others for 10 days	Home Antigen test on Day 3-5 or after ok. Clinic PCR best. If unable to test or choose not to continue Isolation for 10 days	If Neg Ag or PCR test- Yes <u>Must</u> wear well-fitting mask for next 5 days around others (10 total days)

SUMMARY

ISOLATION

DAYS

0 Symptoms begin or a positive test is taken

1 Begin counting isolation days

2

3

4

5

Wear a mask around othersⁱ

6

7

8

9

10

11

Isolation overⁱⁱ

- Take a COVID testⁱⁱⁱ on or after Day 5 and it is negative, AND
- Have been fever free for 24 hours (without fever-reducing medicines), AND
- Have no symptoms or existing symptoms are improving

- When in isolation, you must wear a highly protective mask around others even in your own home. If you end isolation after Day 5, it is strongly recommended that you wear a mask through Day 10.
- Antigen test preferred.
- If you still have a fever or your other COVID-19 symptoms are not improving, stay in isolation & talk with your doctor. If you are immunocompromised or had severe COVID-19, you may need to isolate for longer. Talk with doctor about when you can be around others.

For more information, visit ph.lacounty.gov/covidisolation.

Updated Recommendation for COVID Testing

Reason For Testing	Antigen COVID Test for Patients in All Clinic Sites*	ID Now COVID Test	Fulgent COVID PCR Test
COVID Like Symptoms <7 days		X	
COVID Like Symptoms >7 days			X
Exposure to Someone with COVID			X
ID Now unavailable	X		X
Prior positive test in the last 90 days or to Retest with Antigen on or after Day 5 to come out of Iso early	X	X (antigen preferred)	
Other Reason not recommended	X		X

*All sites may order quidel rapid test kits for patient testing, distribution for patients and for staff members to take home in case of exposure or symptoms.

Thank you.

Sherrill Brown, MD
Director, Infection Prevention



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