Wednesday, August 30, 2023

COC Chambers

Presented by San Diego Immunization Coalition

SDIC

San Diego Immunization Coalition

Housekeeping

In-Person

- Registration
- Refreshments
- Restroom location
- Please keep phones on silent
- Parking
- Emergency Exits

On Zoom

- Stay muted and have cameras off
- Please post all questions in the chat box, only questions on the chat will be accepted
- If experiencing technical difficulties, please contact Ashley.McKay1@sdcounty.ca.gov

SDIC Mission Statement

The mission of SDIC is to increase immunization rates and improve the health of the residents of San Diego County by raising awareness and providing education about vaccine-preventable diseases.

SDIC
San Diego Immunization Coalition

Agenda

Time (PM)	Topic
1:00	Welcome and Announcements
1:10-1:15	Public Health Officer Opening Remarks
1:15 – 1:25	2022-2023 State-Purchased Influenza Vaccine Program Awards Presentation
1:25 – 1:45	Influenza, COVID-19, and RSV 2022-2023 Surveillance Summary
1:45 – 2:25	Flu + 2: What's New?
2:25 – 2:40	BREAK (15 min)
2:40 – 3:00	Respiratory Syncytial Virus (RSV): Burden of Disease in All Infants and Potential Prevention Strategies
3:00 – 3:30	Clinic Considerations for Influenza, COVID-19, and RSV Vaccinations/Injectables
3:30 – 3:45	SDIC Partner Announcements
3:45– 4:00	Closing Remarks

THANK YOU TO OUR EXHIBITORS!

JIREH PROVIDERS

SAN DIEGO PATH PROTECTING AGAINST HPV

UC San Diego Health

community

MotherToBaby® California

gsk

County of San Diego Health and Human Services Agency

LIVE WELL SAN DIEGO

PHAB

CALIFORNIA WIC WOMEN, INFANTS & CHILDREN Families grow healthy with WIC

sanofi

Albertsons VONS PAVILIONS

novavax

CHAMPIONS for HEALTH

2-1-1 SAN DIEGO

San Diego Rotary

Public Health Officer Opening Remarks

Wilma Wooten, M.D., M.P.H.

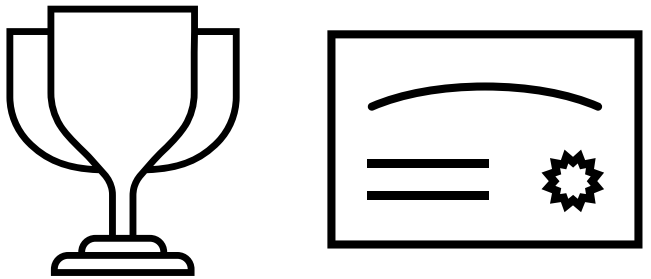
Public Health Officer

Public Health Services
County of San Diego Health & Human Services Agency

Influenza Vaccine Program Awards

2022-2023 State-Purchased Influenza Vaccine Program Awards Presentation

Presented by
County of San Diego Immunizations Unit



Danelle Wallace, MPH

Danelle is a Senior Epidemiologist with the Epidemiology and Immunization Services Branch of Public Health Services for the County of San Diego Health & Human Services Agency. In this capacity, she is responsible for participating in reportable disease surveillance, data analysis, contract oversight, Epidemiologist supervision, and reporting of vaccine-preventable diseases and immunizations. In her free time, Danelle enjoys outdoor activities such as hiking and biking and also enjoys practicing yoga several times a week.

INFLUENZA, COVID-19, AND RSV 2022-2023 SURVEILLANCE SUMMARY

KICK THE FLU SUMMIT
AUGUST 30, 2023

Danelle Wallace, MPH
Senior Epidemiologist
Epidemiology and Immunization Services Branch
County of San Diego Health and Human Services Agency

COUNTY OF SAN DIEGO
HEALTH AND HUMAN SERVICES AGENCY

LIVE WELL SAN DIEGO

ACCREDITED HEALTH DEPARTMENT • PUBLIC HEALTH ACCREDITATION BOARD • PHAB Advancing public health performance

5 Reasons Influenza Surveillance Matters

1. To measure population impact
2. To identify outbreaks and severe illness trends
3. To identify novel influenza strains
4. To assess match of circulating strains to vaccine
5. To provide surveillance data to stakeholders

INFLUENZA SURVEILLANCE ACTIVITIES

Syndromic Surveillance

Sentinel Sites

Laboratory Testing

Case Reporting and Data Collection

Outbreak Detection

Data Analysis

Media Requests

Preparing Reports

RESPIRATORY VIRUSES IN THE NEWS - 2022

LIVE WELL SAN DIEGO

npr kpbs

NEWSLETTERS SIGN IN NPR SHOP

NEWS CULTURE MUSIC PODCASTS & SHOWS SEARCH

HEALTH

Children's hospitals grapple with a nationwide surge in RSV infections

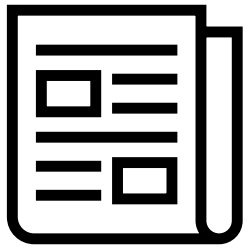
CBS NEWS NEWS SHOWS LIVE LOCAL

U.S. ›

U.S. sees biggest rise in COVID-19 hospitalizations since December

CNN health Life, But Better Fitness Food Sleep Mindfulness Relationships

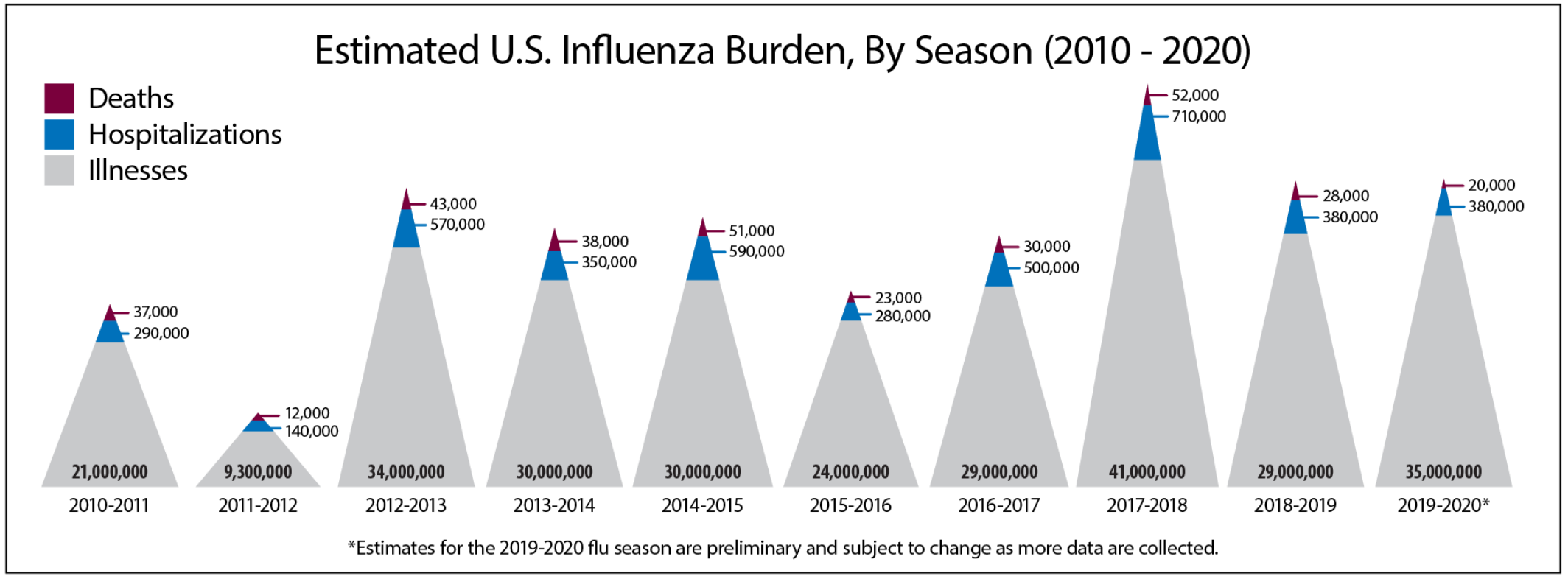
Flu season already hitting hard across half of the US and children's hospitals are still feeling the pressure from respiratory illnesses



2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023

Estimated Influenza Disease Burden, by Season
United States, 2010-11 through 2019-20 Influenza Seasons

Influenza Division CDC



Preliminary Results
Data Source: Centers for Disease Control and Prevention (CDC)
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023

2022-2023 U.S. Flu Season: Preliminary In-Season Burden Estimates

Influenza Division CDC

Preliminary in-season burden estimates for the 2023-2024 season will begin again in the fall when the season starts. The preliminary in-season burden estimates below for the 2022-2023 season will no longer be updated weekly. The preliminary end of season estimates for the 2022-2023 season will be posted during Fall 2023.

CDC estimates* that, from **October 1, 2022** through **April 30, 2023**, there have been:

27 – 54 million
flu illnesses

12 – 26 million
flu medical visits

300,000 – 650,000
flu hospitalizations

19,000 – 58,000
flu deaths

*Because influenza surveillance does not capture all cases of flu that occur in the U.S., CDC provides these estimated ranges to better reflect the larger burden of influenza. These estimates are calculated based on data collected through CDC's Influenza Hospitalization Surveillance Network (FluSurv-NET) and are **preliminary**.

Preliminary Results
Data Source: Centers for Disease Control and Prevention (CDC)
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

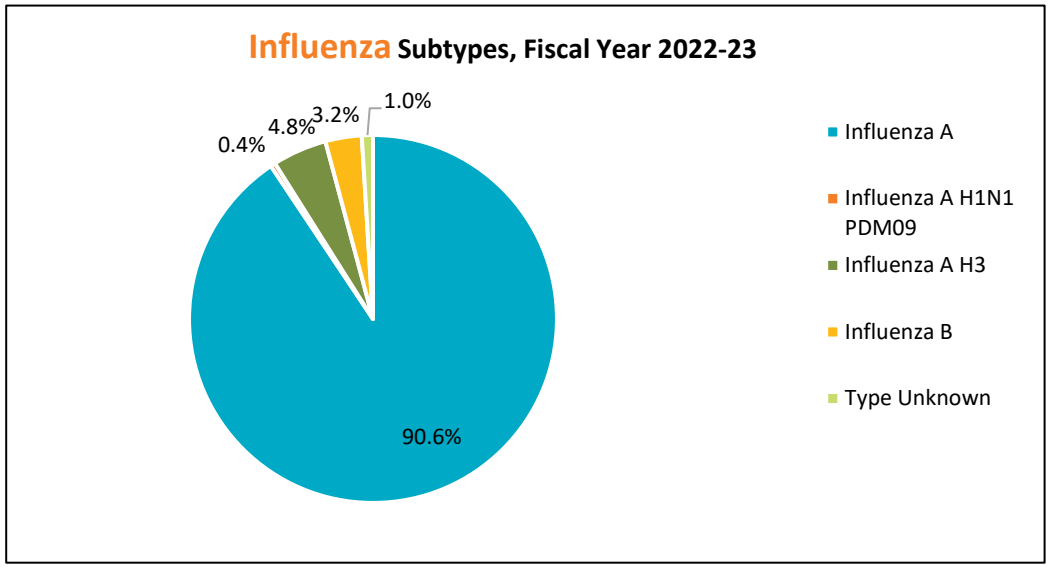
2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

TOTAL REPORTED INFLUENZA CASES

N=21,711

44
Deaths

25
Outbreak



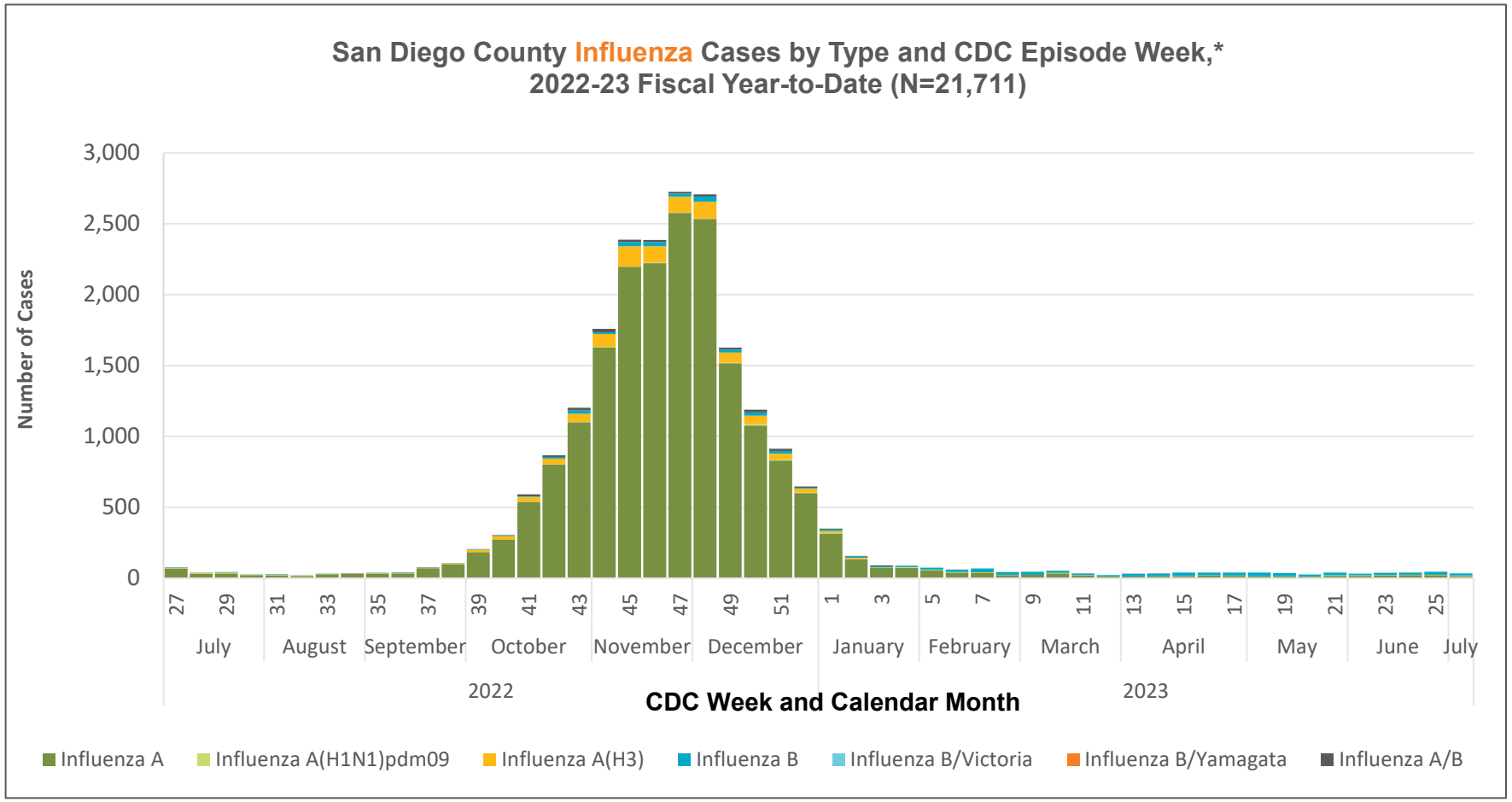
Influenza Surveillance Indicators

Surveillance Indicator	2022-23 Season	2021-22 Season	Prior 5-Season Average*
All influenza detections reported (rapid or PCR)	21,711	4,192	11,253
Number of influenza-related outbreaks reported∞	25	1	40
Number of influenza-related deaths reported^	44	8	108

*Includes FYs 2017-18, 2018-19, 2019-20, 2020-21, and 2021-22. Influenza season is July 1 – June 30, Weeks 27-26.
∞At least one case of laboratory-confirmed influenza in a setting experiencing two or more cases of influenza like illness (ILI) within a 72-hour period.
Total confirmed influenza outbreaks in prior seasons: 34 in 119 in 2017-18, 25 in 2018-19, 61 in 2019-20, 0 in 2020-21, and 1 in 2021-22.
^Current FY deaths are shown by week of report; by week of death for prior FYs. Total deaths reported in prior seasons: 343 in 2017-18, 77 in 2018-19, 108 in 2019-20, 2 in 2020-21, and 8 in 2021-22.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY



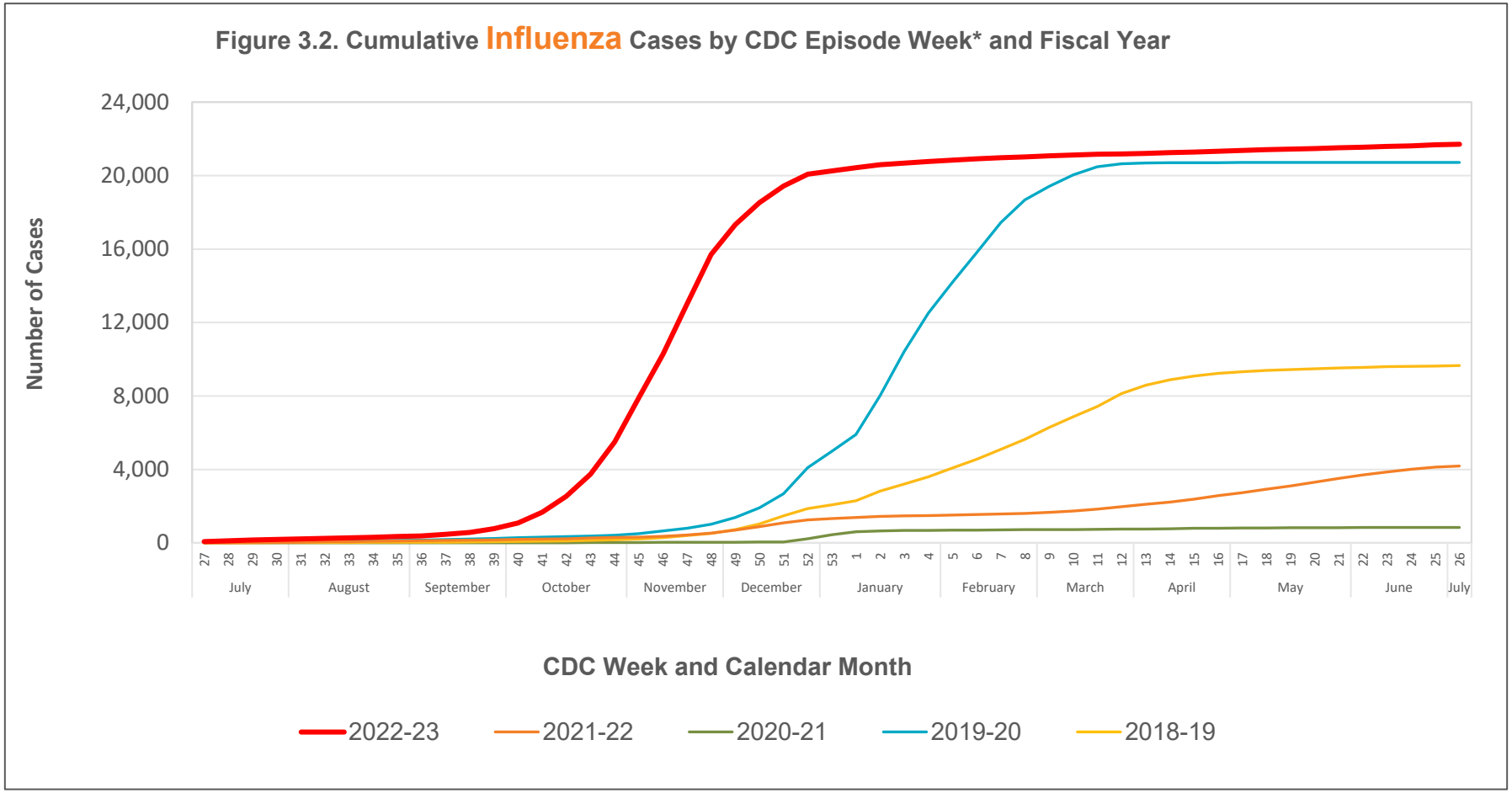
*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported.

*If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

Figure 3.2. Cumulative Influenza Cases by CDC Episode Week* and Fiscal Year



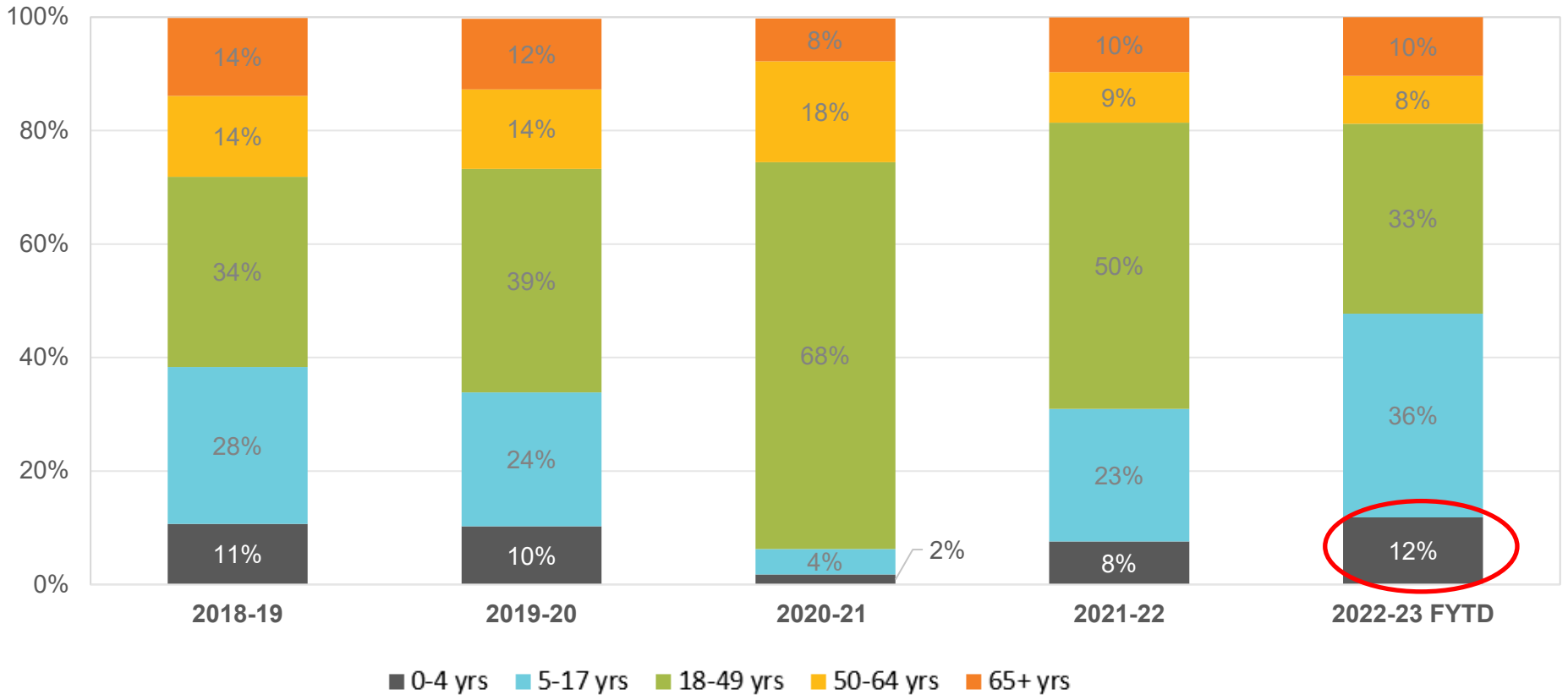
*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported.

*If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

Figure 13. Proportion of Influenza Cases by Age Group and Fiscal Year



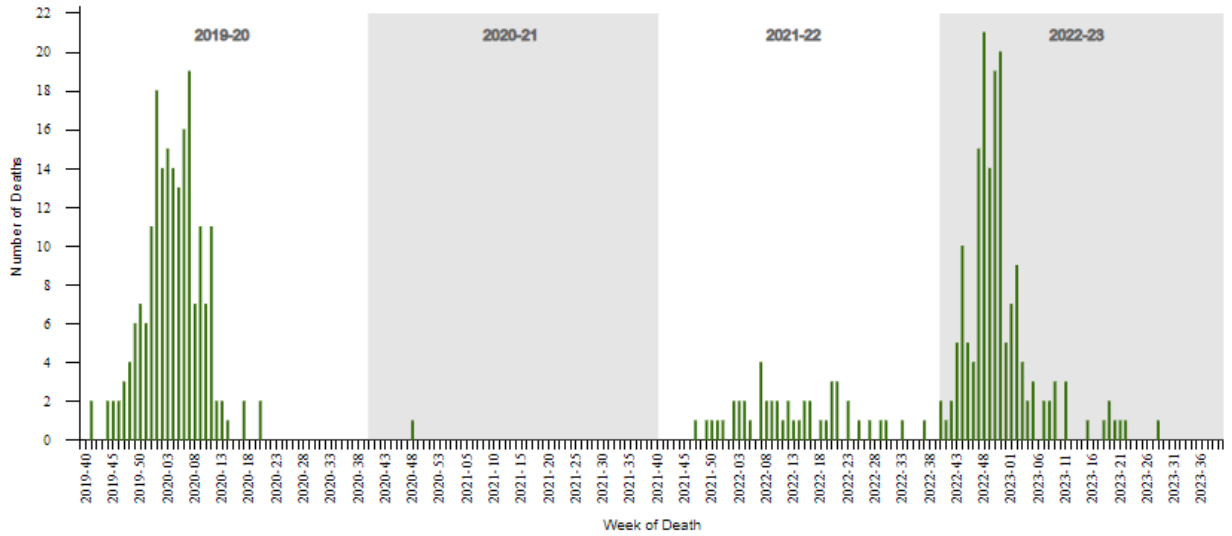
Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023

NUMBER OF INFLUENZA-ASSOCIATED PEDIATRIC DEATHS BY WEEK OF DEATH

Group By ◉ Reported ○ Virus Type [Download Image] [Download Data]

◉ By Week ☐ Current Week ☑ Previous Weeks ○ All Deaths



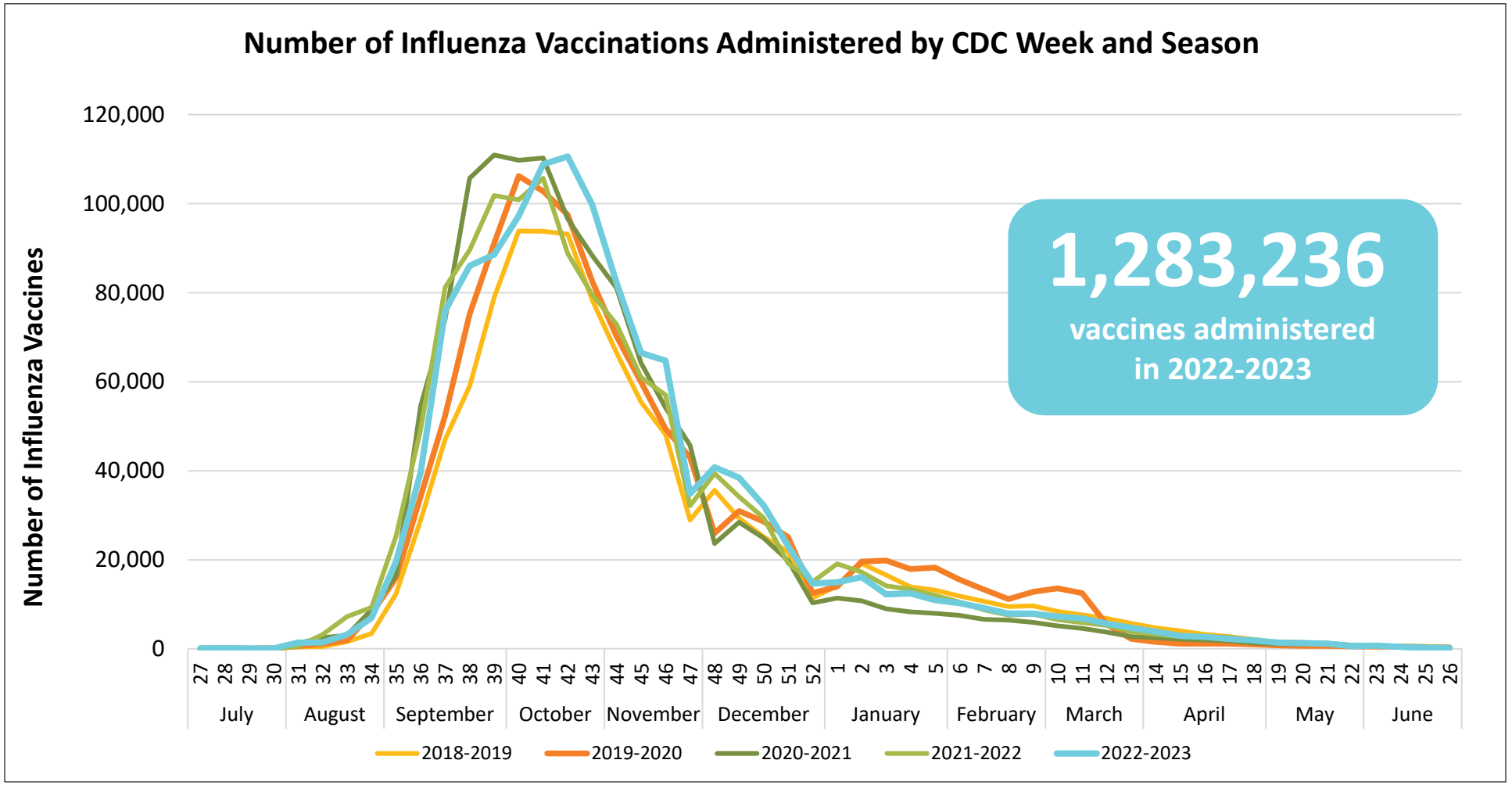
Seasons	Total Deaths	Deaths reported During the Week Ending 12 Aug 2023
2019-20	199	0
2020-21	1	0
2021-22	49	2
2022-23	168	2

Preliminary Results

Data Source: CDC FluVaxView Interactive (Influenza-associated Pediatric Mortality (cdc.gov))

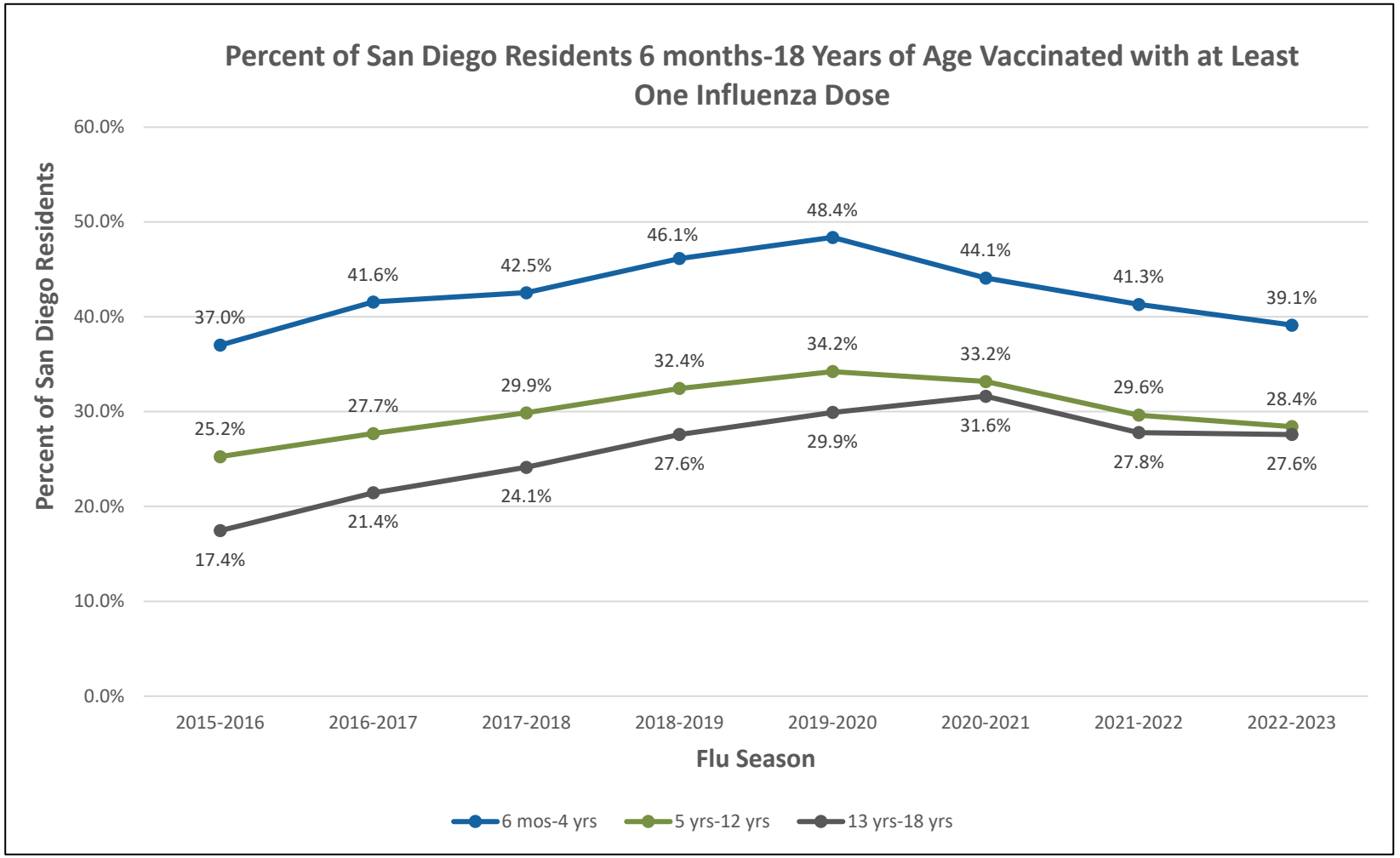
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY



Preliminary Results
Data Source: California Immunization Registry (CAIR2)
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

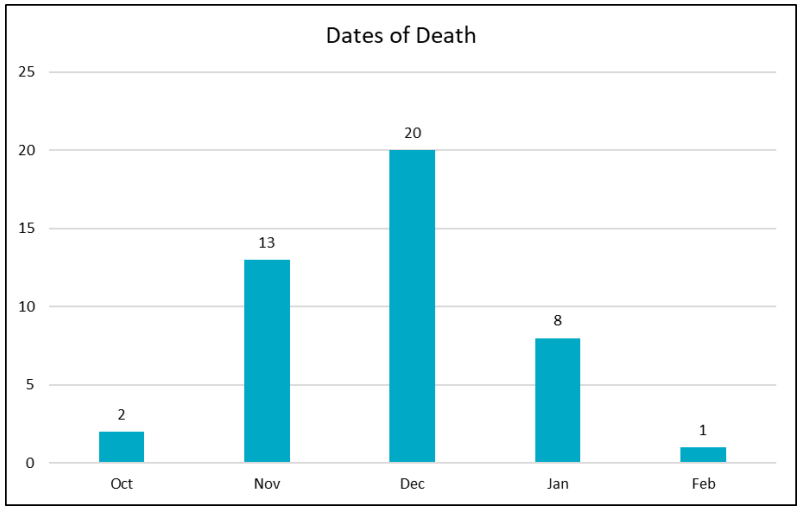


Preliminary Results
Data Source: California Immunization Registry (CAIR2)
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

44 deaths

39 Influenza A subtype unknown,
4 Influenza A(H3), and 1 Influenza A (H1N1)pdm09



3 were co-infected with COVID-19

96%

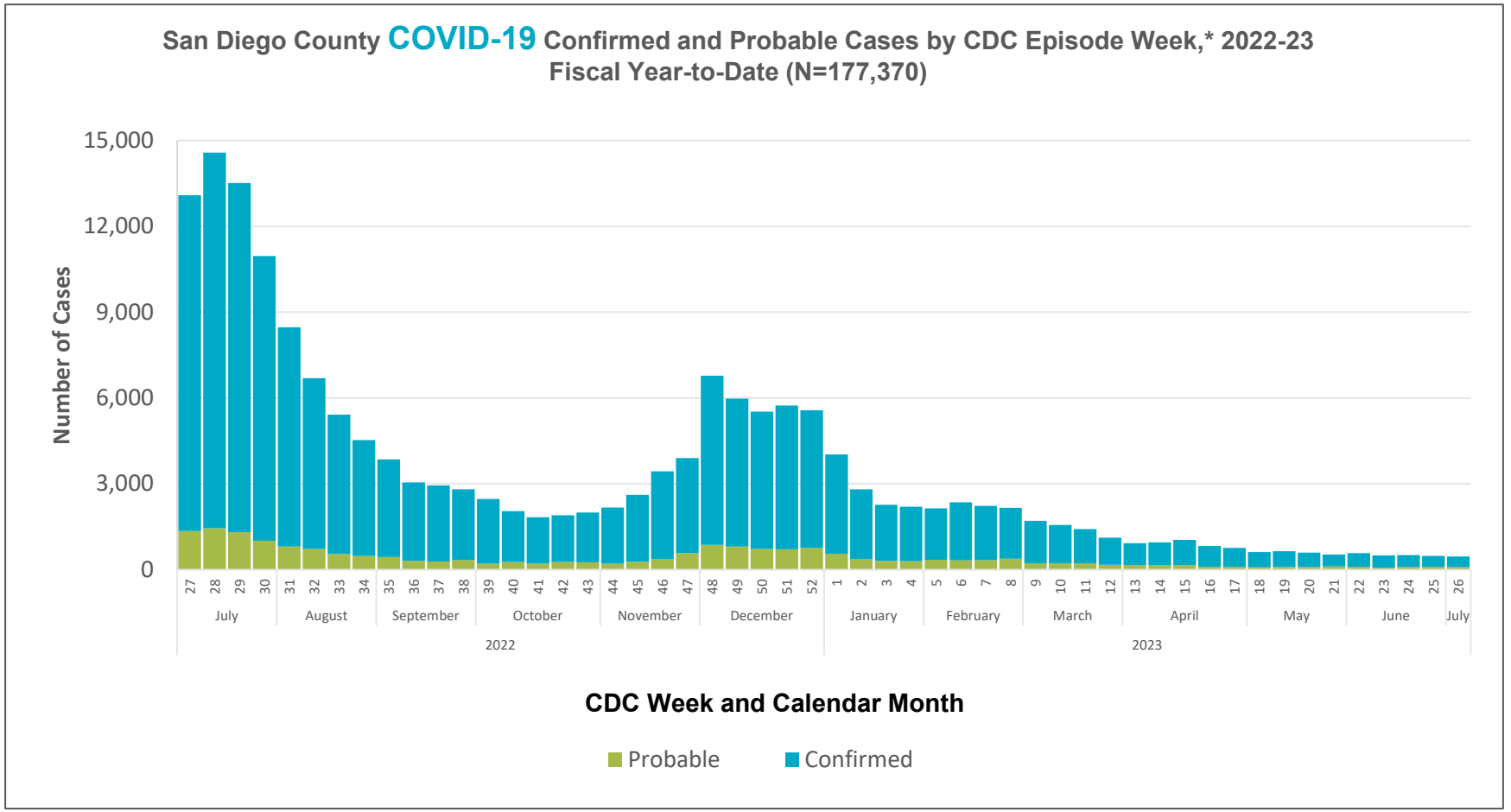
had underlying conditions

12 known to be vaccinated

Age Range **4-101** years old

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

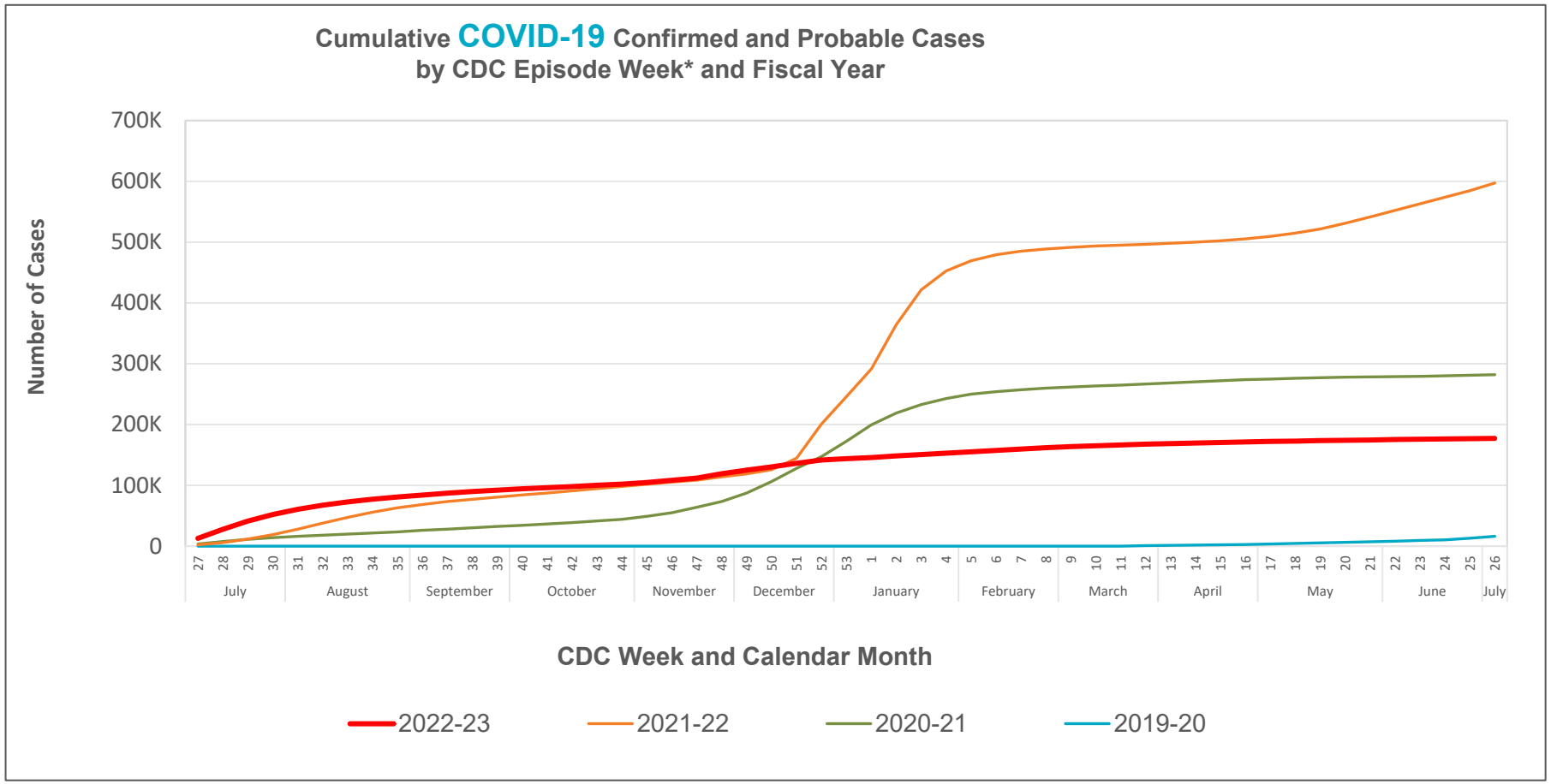


*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported.

*If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY



*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported.

*If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

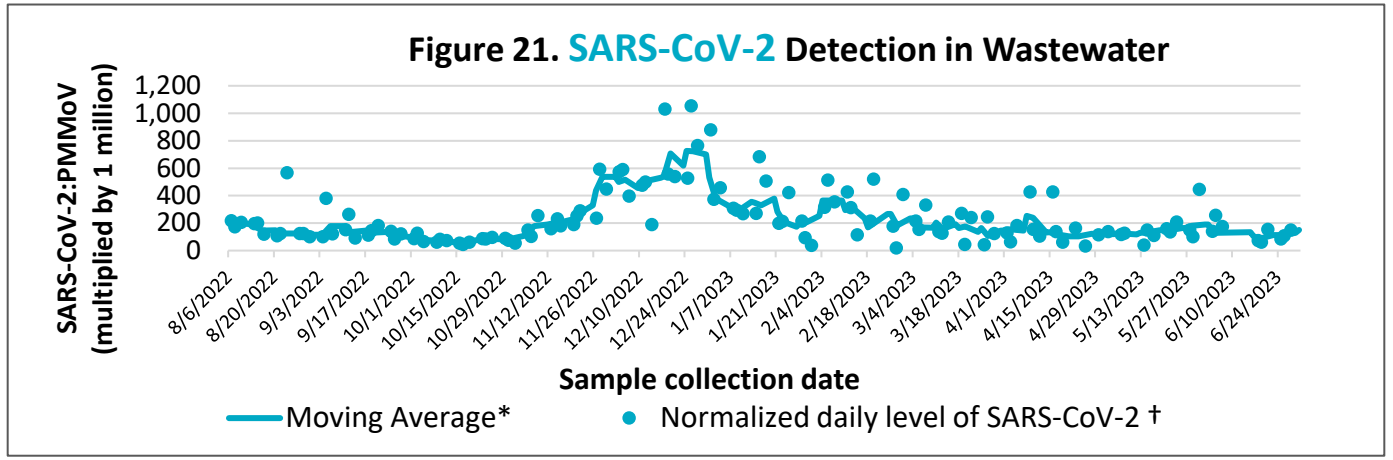
2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

TOTAL REPORTED COVID-19 CASES

N=156,475

626
Deaths

498
Outbreak



COVID-19 Surveillance Indicators

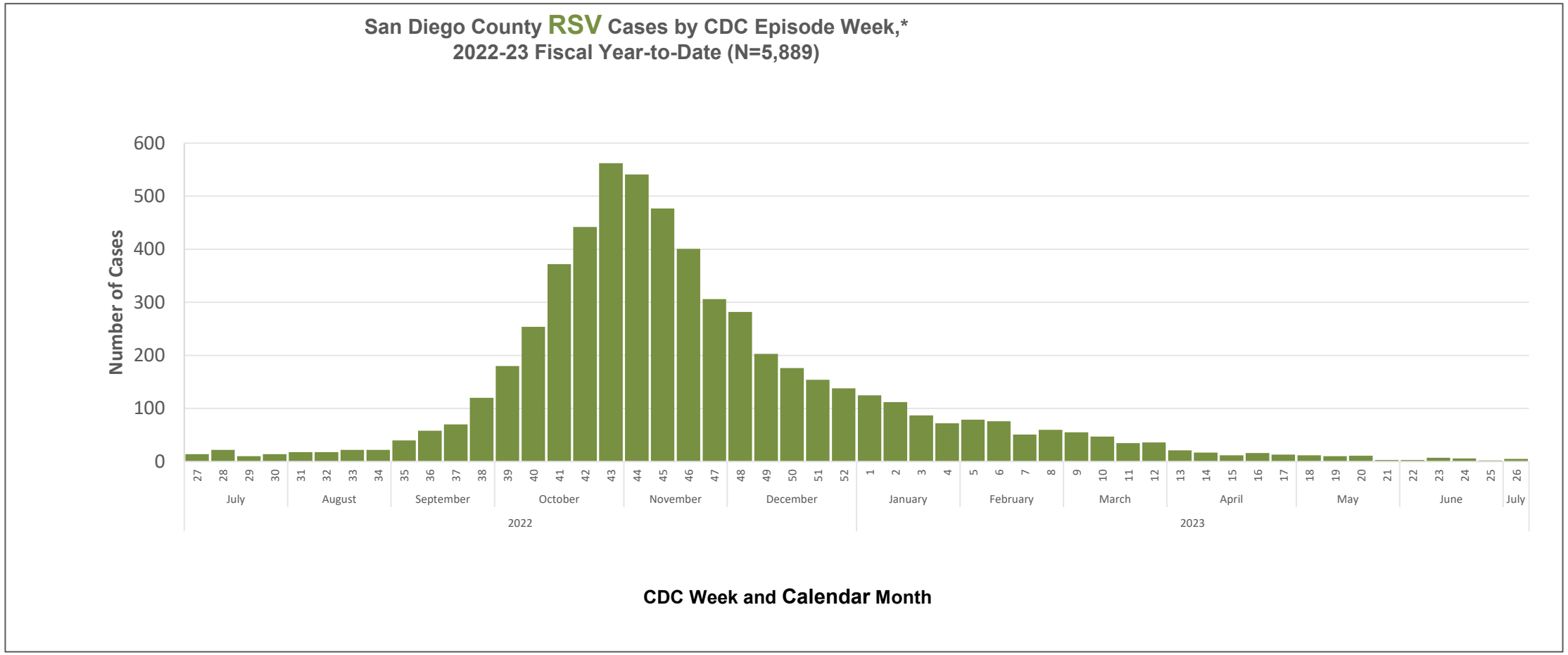
Surveillance Indicator	2022-23 Season	2021-22 Season
All COVID-19 detections reported (rapid or PCR)	156,475	551,121
Number of COVID-19-related outbreaks reported∞	498	605
Number of COVID-19-related deaths reported^	626	1,635

*Calculated by taking the average of the 5 samples centered around a date after excluding the highest and lowest values.
†Data are normalized to a common, harmless plant virus that is consumed when people eat called pepper mild mottle virus (PMMoV).

∞Includes those in Skilled Nursing Facilities: at least one facility-acquired case of laboratory-confirmed COVID-19 in a resident. o Non-SNF Residential Congregate Settings: At least three suspected, probable, or confirmed COVID-19 cases within a 14-day period in epidemiologically-linked residents and/or staff.
^Current FY deaths are shown by week of report; by week of death for prior FYs. Total deaths reported in prior seasons: 386 in 2019-20, 3,402 in 2020-21,and 1,635 in 2021-22.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry & Wastewater SCAN: https://wastewaterscan.org/.
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY

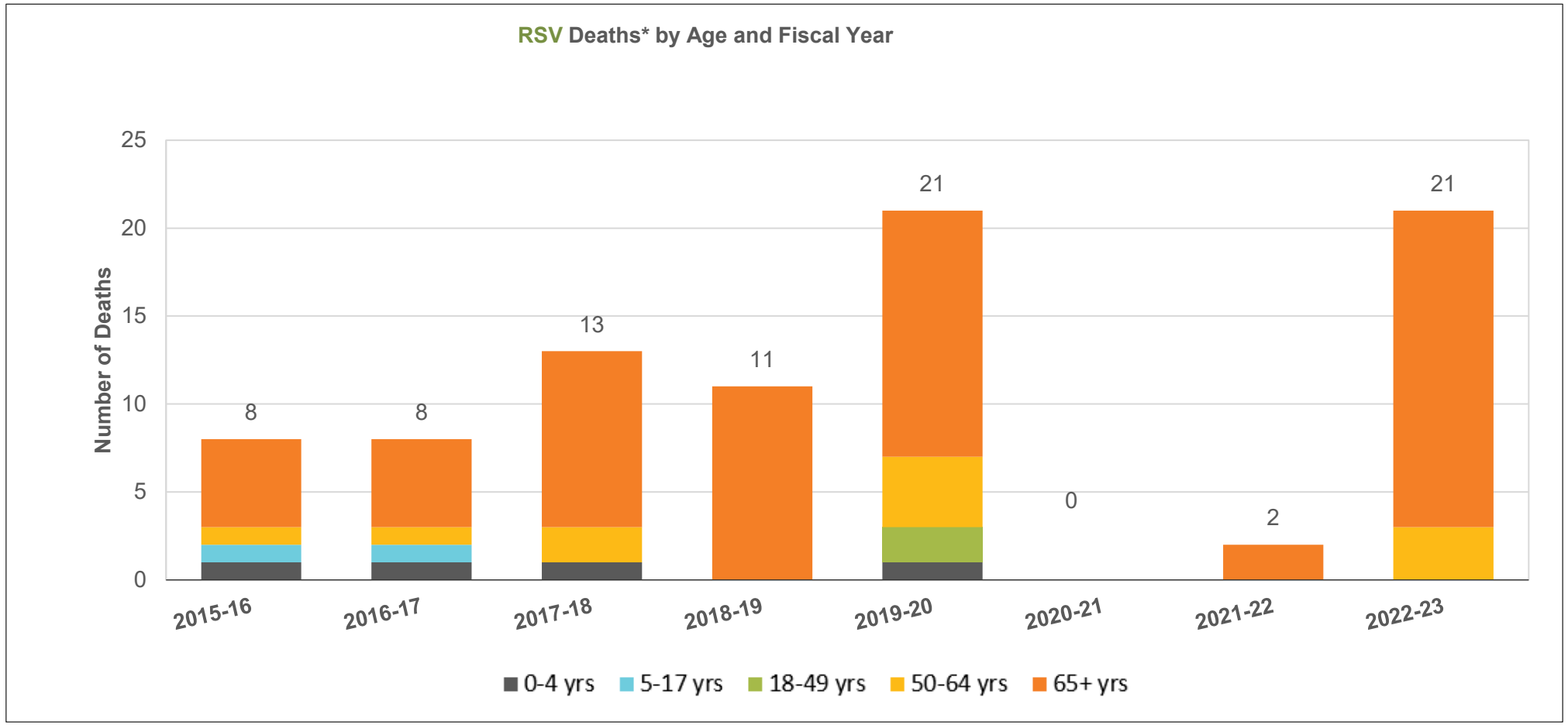


*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported.

*If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

2022-2023 SEASON SUMMARY
JULY 1, 2022 – JUNE 30, 2023
SAN DIEGO COUNTY



*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported.

*If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead.

Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

RESPIRATORY WATCH

San Diego County
Respiratory Virus Surveillance Report

Prepared by Epidemiology and Immunization Services Branch

www.sdepi.org

August 10, 2023

COVID-19	Influenza	RSV
Cases: 3,722	Cases: 259	Cases: 41
Deaths: 17	Deaths: 0	Deaths: 0
Outbreaks*: 27	Outbreaks*: 0	Outbreaks*: 0
7/2/2023 – 8/5/2023	*7/2/2023 – 8/5/2023*	*7/2/2023 – 8/5/2023*

*In residential congregate settings

Report Content Links

Subscribe to the Influenza Watch

Go to **www.sdepi.org** to subscribe!

REPORTING FLU CASES

- Please report positive influenza results to public health:
  - Lab results and demographics
  - Fax to 858-715-6458

- Please report influenza deaths
- Please report influenza outbreaks

- Questions about reporting?
  - Call 619-692-8499

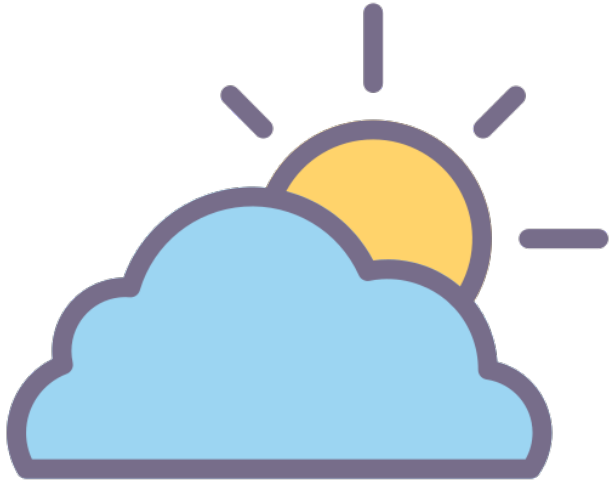
RESPIRATORY VIRUS FORECAST

Flu, COVID-19, & RSV

HEALTH

How Bad Will Flu Season Be This Year?

Older adults urged to get influenza vaccines in early autumn



JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

ACADEMICS RESEARCH PRACTICE

What's in Store for the Upcoming Respiratory Virus Season?

New vaccines and a preventive drug for RSV may help temper the 2023–2024 virus season.

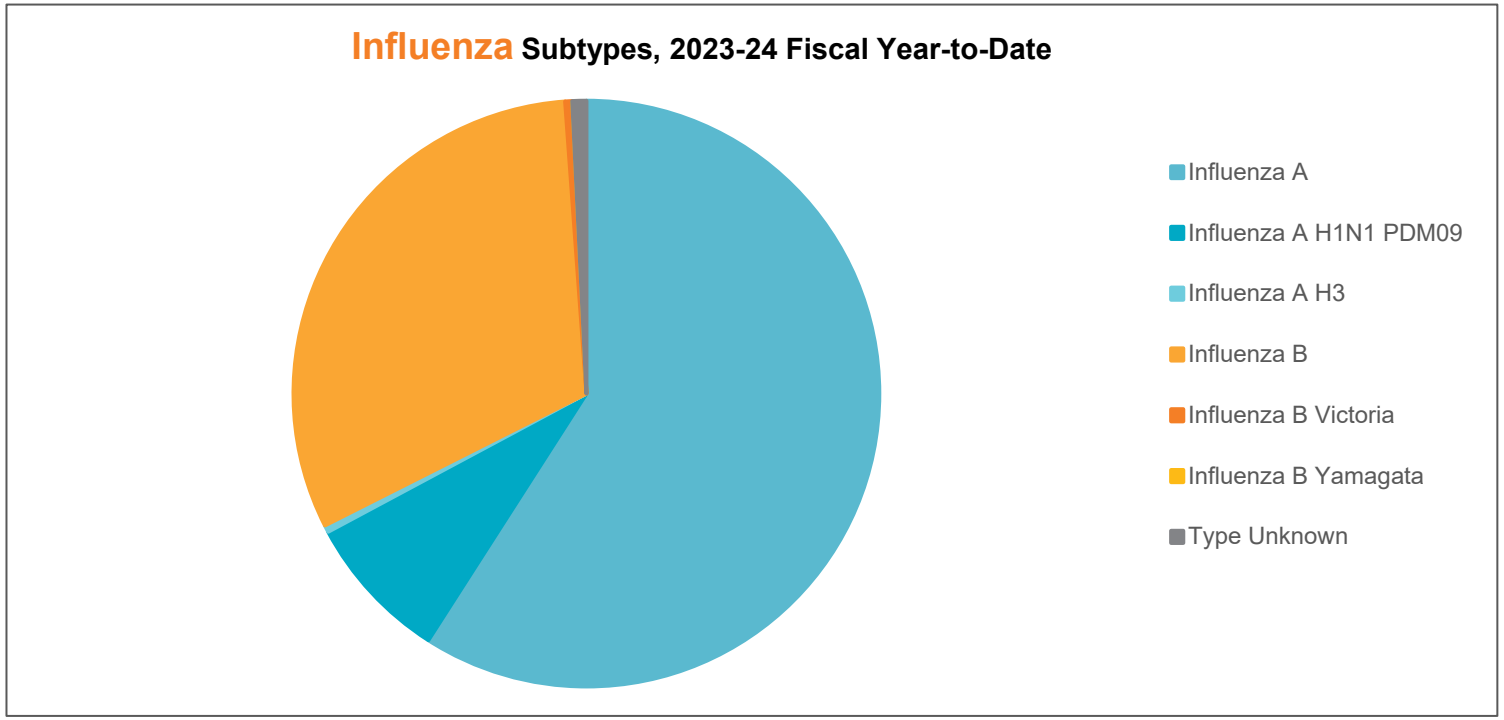
CURRENT UPDATE
JULY 2, 2023 – 8/5/2023

TOTAL REPORTED INFLUENZA CASES

N=259

0
Deaths

0
Outbreaks



Preliminary Results
Data Source: San Diego County Communicable Disease Registry
Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

THANK YOU

Danelle Wallace
Senior Epidemiologist
DanelleRuth.Wallace@sdcounty.ca.gov

ACKNOWLEDGEMENTS:

Collaborating Hospitals, Infection Control Practitioners, Labs, and Healthcare Partners

San Diego Health Connect

County of San Diego

PUBLIC HEALTH SERVICES

On May 17, 2016, the County of San Diego Health and Human Services Agency Department of Public Health Services received accreditation from the Public Health Accreditation Board.

Mark Sawyer, MD

Dr. Mark Sawyer is an infectious disease specialist and a professor of clinical pediatrics at UC San Diego School of Medicine and Rady Children's Hospital. He received his medical degree from The Pritzker School of Medicine at the University of Chicago Division of the Biological Sciences and has been in practice for more than 30 years. Dr. Sawyer is a past member of the American Academy of Pediatrics Committee on Infectious Diseases, the FDA Vaccines and Related Biological Products Advisory Committee (VRBPAC) and the CDC Advisory Committee on Immunization Practices (ACIP) and is an Associate Editor of the AAP Red Book. Recently, he was recalled to VRBPAC to work on the FDA approval of COVID vaccines and was one of 11 experts selected for the state of California's COVID-19 Scientific Safety Review Workgroup.

Flu + 2:What's New?

Mark H. Sawyer, MD

UC San Diego School of Medicine

1+1+1>3

How to provide influenza, COVID, and RSV vaccines all at once

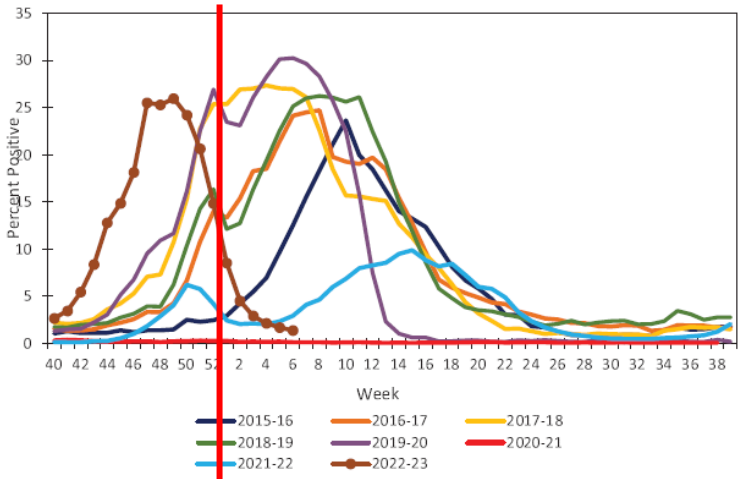
COUNTY OF SAN DIEGO
HEALTH AND HUMAN SERVICES AGENCY

LIVE WELL SAN DIEGO

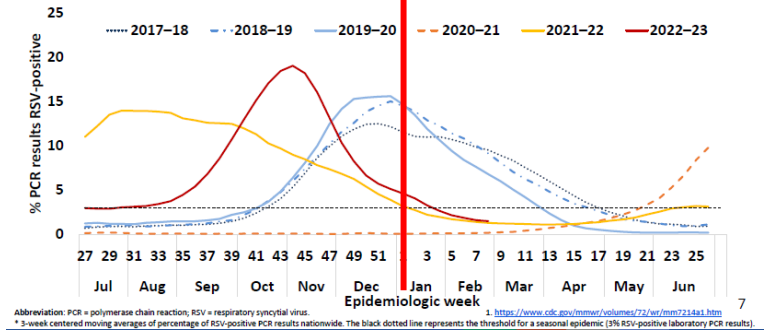
Accredited Health Department
PHAB
Advancing Public Health Performance
Public Health Accreditation Board

Timing is everything!

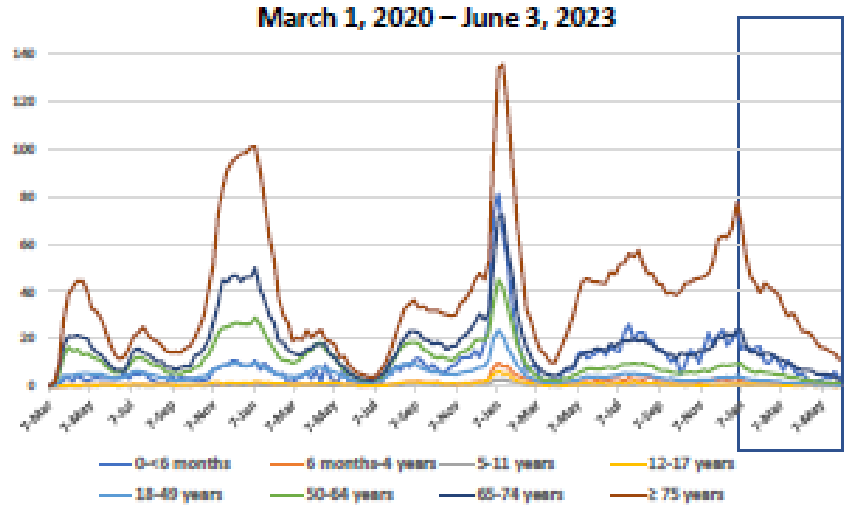
Influenza



RSV



COVID



Jones-ACIP meeting August 2023; CDC.gov August 2023

Audience response

Which is worse: COVID, Influenza, or RSV?

A) COVID

B) Influenza

C) RSV

D) They are equally bad

Influenza, COVID, RSV: Which is worse?

It depends who you are!

Adults	Children	Infants
▪ COVID	▪ Influenza	▪ RSV
▪ Influenza	▪ COVID	▪ Influenza
▪ RSV	▪ RSV	▪ COVID

Objectives

SUB-TITLE

- Describe the different influenza vaccines available so that you choose the right one for your patient
- Explain who is not getting an influenza vaccine so that you are on the lookout for them
- Discuss how to incorporate influenza, COVID, and RSV vaccines into your clinic routine so that you don’t miss the opportunity to protect your patients
- Describe how to communicate about influenza vaccine effectiveness so that you can inform your patients.

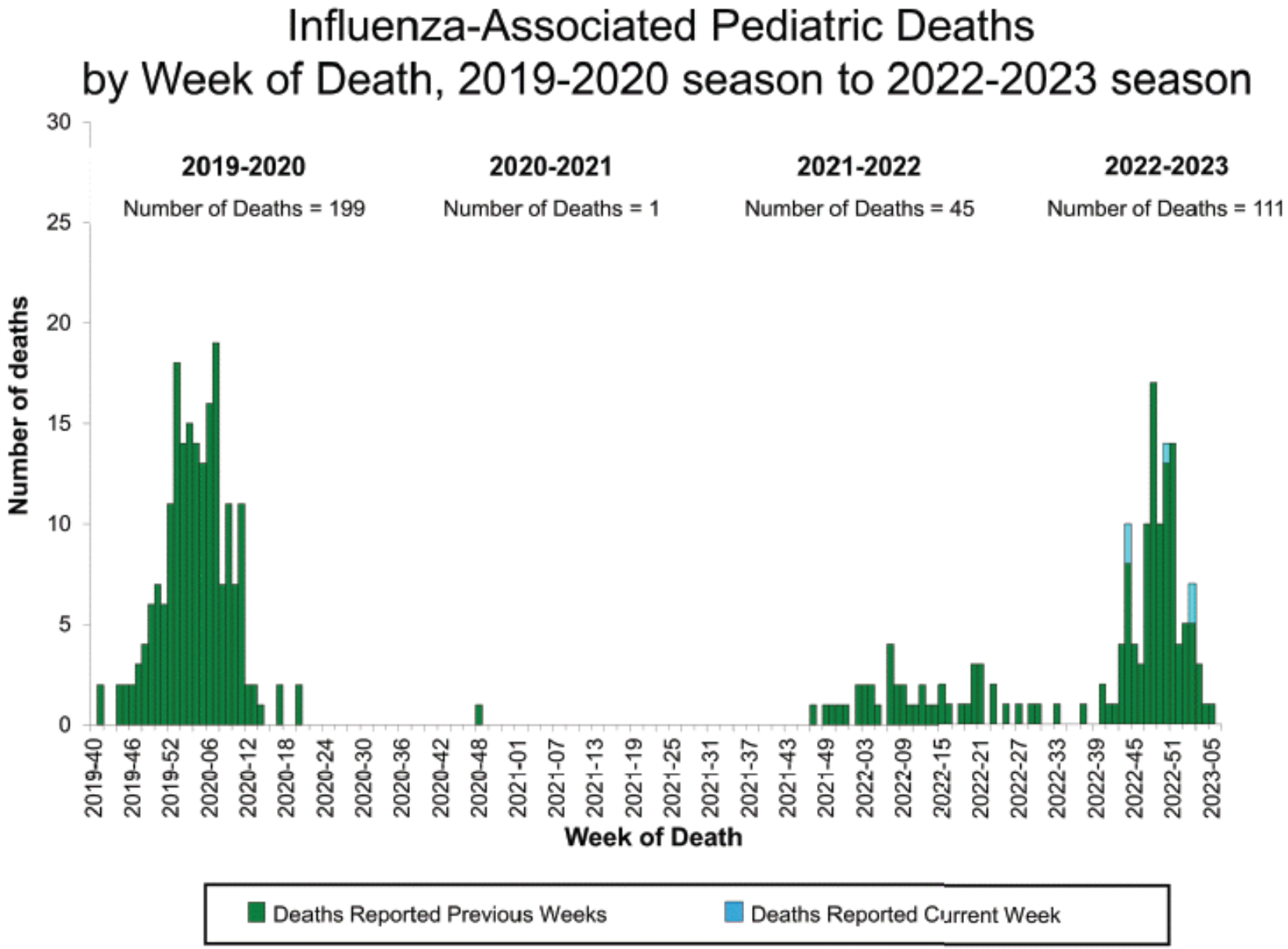
Vaccine disparities-National Immunization Survey

TABLE 2. Estimated vaccination coverage by age 24 months* among children born during 2017–2018,† by selected vaccines and doses an health insurance status§ — National Immunization Survey-Child, United States, 2018–2020

Vaccine/Dose	Health insurance status, % (95% CI)			
	Private only (referent) (n = 15,686)	Any Medicaid (n = 10,331)	Other insurance (n = 2,280)	Uninsured (n = 817)
DTaP¶				
≥3 doses	96.3 (95.7–96.9)	92.1 (91.0–93.0)**	92.3 (89.9–94.2)**	85.1 (80.9–88.7)**
≥4 doses	87.7 (86.5–88.8)	77.7 (76.1–79.3)**	78.2 (74.7–81.5)**	61.9 (55.2–68.7)**
Poliovirus (≥3 doses)	95.4 (94.6–96.0)	91.0 (89.9–92.1)**	91.2 (88.9–93.3)**	83.9 (79.7–87.8)**
MMR (≥1 dose)††	94.4 (93.5–95.1)	89.8 (88.6–90.9)**	90.3 (87.3–92.8)**	82.3 (76.8–87.2)**
Hib§§				
Primary series	95.8 (95.1–96.4)	91.2 (90.1–92.3)**	91.4 (89.0–93.5)**	82.4 (77.3–86.9)**
Full series	86.8 (85.6–87.9)	75.8 (74.1–77.5)**	77.4 (73.8–80.9)**	61.5 (54.9–68.1)**
Influenza (≥2 doses)¶¶¶	74.2 (72.8–75.6)	49.9 (47.9–51.8)**	57.8 (53.6–62.0)**	36.4 (30.5–43.0)**
Combined 7-vaccine series***	78.3 (76.8–79.6)	65.6 (63.7–67.4)**	65.7 (61.7–69.7)**	48.3 (41.8–55.2)**
No vaccinations	0.8 (0.6–1.0)	1.0 (0.8–1.3)	0.9 (0.5–1.4)	3.3 (1.9–5.4)**

Hill HA, MMWR, October 15 2021;70(41):1435

Influenza is back!



Audience Response

How effective was the influenza vaccine in 2022-2023?

A) 30-40%

B) 40-50%

C) 50-60%

D) 60-70%

E) All of the above

Vaccine effectiveness depends on who you are and what you mean by "effectiveness"

- The same vaccine can be:
  - 40% effective in preventing symptoms
  - 50% effective in preventing you from getting sick enough to go see the doctor
  - 60% effective in preventing hospitalization
  - 70% effective in preventing ICU admission
  - 80% effective in preventing death

- The same vaccine can be:

  70% effective in children

  60% effective in adults 18-64

  50% effective in adults 65 and over

  30% effective inimmunocompromised patients

Influenza vaccine effectiveness: 2022-2023

Preliminary Data

Vaccine effectiveness against laboratory confirmed influenza A* in hospital and ED settings, September 13, 2022–January 25, 2023**

	Influenza positive		Influenza negative[1]		Vaccine Effectiveness: Unadjusted		Vaccine Effectiveness: Adjusted[2]	
	N vaccinated /Total	(%)	N vaccinated /Total	(%)	VE %	95% CI	VE %	95% CI
Influenza A								
All 6 mos – 17 years	123/640	19	750/2256	33	52	(41 to 62)	**49**	**(36 to 60)**
Inpatient	19/131	15	288/913	32	63	(39 to 78)	**68**	**(46 to 81)**
ED	104/507	21	461/1330	35	51	(38 to 62)	**42**	**(25 to 56)**
A/H3N2	98/478	21	750/2256	33	48	(34 to 59)	**45**	**(29 to 58)**
A/H1N1	23/139	17	750/2256	33	60	(37 to 75)	**56**	**(28 to 72)**

* Of 335 influenza-positive specimens sequenced, 250 were A(H3N2) clade 3C.2a1b.2a.2b and 32 were clade 3C.2a1b.2a.2a.1 and 38 were A(H1N1) clade 6B.1A.5a.2a.1. There were 16 coinfections with Influenza and SARS-CoV-2 that were excluded from the VE estimate.

** Site specific influenza seasons were determined from local influenza activity at each site.

[1] Persons testing negative for both influenza and SARS-CoV-2 using molecular assays.

[2] Multivariable logistic regression models adjusted for site, age, and calendar time.

NVSN

ACIP meeting-February 2023

How to organize the influenza vaccines

- Basic vaccine-good for everyone
  - Different dose for young children < 3 years of age
  - Two doses for children <9 years the first time they are immunized
- Live attenuated influenza vaccine-the nasal vaccine
  - For healthy people 2 through 49 years of age
- Preferred products for seniors-65 years and older
  - High-dose influenza vaccine (Fluzone); Recombinant influenza vaccine (Flublok); adjuvanted influenza vaccine (Fluad)
- We don’t care if they are made in eggs or not

Influenza Vaccines by Age Indication, United States, 2022–23 Influenza Season

Vaccine type		0 through 6 months	6 through 23 months	2 through 17 years	18 through 49 years	50 through 64 years	≥65 years
IIV4s	Standard-dose, unadjuvanted inactivated (IIV4)		Afluria Quadrivalent Fluarix Quadrivalent FluLaval Quadrivalent Fluzone Quadrivalent				
	Cell culture-based inactivated (ccIIV4)		Flucelvax Quadrivalent				
	Adjuvanted inactivated (aIIV4)						Fluad Quadrivalent
	High-dose inactivated (HD-IIV4)						Fluzone High-Dose Quadrivalent
RIV4	Recombinant (RIV4)				Flublok Quadrivalent		
LAIV4	Live attenuated (LAIV4)			FluMist Quadrivalent			

Not approved for age group *Egg-based* *Not egg-based*

https://emergency.cdc.gov/coca/ppt/2022/090822_slides.pdf0

Brief Aside: IIV4s for 6- through 35-Month-Olds

- **All unadjuvanted, standard-dose IIV4s are now approved for ages ≥6 months.**
- **Still some differences in the dose volumes:**
  - Fluarix Quadrivalent: 0.5 mL
  - Flucelvax Quadrivalent: 0.5 mL
  - FluLaval Quadrivalent: 0.5 mL
  - Fluzone Quadrivalent: 0.25 mL ***or*** 0.5 mL
    - 0.25 mL prefilled syringes no longer available.
  - Afluria Quadrivalent: 0.25 mL
    - 0.25 mL prefilled syringes no longer available.
- **Dose volume is distinct from number of doses needed:**
  - As previously, some children aged 6 months through 8 years need two doses.
  - For example, a first-time influenza vaccinee who is 1 year old,
  - And who gets 0.5mL FluLaval Quadrivalent for a first dose—
  - Still needs a second dose of influenza vaccine, ≥4 weeks later.

https://emergency.cdc.gov/coca/ppt/2022/090822_slides.pdf

2 doses of influenza vaccine

Children under 9 years of age MAY need 2 doses of influenza vaccine, one month apart, this fall

Those who have not had 2 doses or more in their lifetime (EVER) before July 1, 2023

Those whose immunization history is unknown

If you become nine years of age between dose #1 and #2 you still get #2

CDC.GOV

Why don’t people get a flu shot?

- Seniors-”I don’t get the flu; The flu vaccine gave me the flu”
- High risk adults- don’t know they need it; too busy
- Healthy children-don’t know they need it; to busy; access/convenience
- High risk children- don’t know they need it; subspecialty doctors may not give it; access
- Pregnant women-don’t know they need it; safety concerns

We can do something about these reasons!!

Audience response

Who is currently recommended to get the new RSV vaccine?

- A) everyone
- B) infants
- C) pregnant women
- D) adults with risk factors regardless of age
- E) adults 60 years of age or older

What is RSV?

- Respiratory Syncytial Virus
- Very frequent cause of respiratory infection
- Causes wheezing illness in infants called bronchiolitis which often leads to hospitalization
- Causes wheezing and/or pneumonia in adults-can be fatal (6000-10,000 deaths each year)
- Why haven't I ever heard of RSV?
  - If you are in pediatrics, you must be new!
  - Adult providers rarely test specifically for RSV
  - The development of multiplex virus testing let to an understanding of how frequent it is in adults

RSV-Four things are happening at once

- Vaccine for adults 60 years and older-recommendations in place-2 vaccine products
- Nirsevimab (monoclonal antibody) for infants-recommendations in place
- Maternal vaccination-recommendations pending
- Infant vaccination-recommendations pending

RSV vaccine recommended for subset of adults 60 years and older

- Two different vaccine products
- Provider and patient to use shared clinical decision making to decide whether to use the vaccine this fall
- Available in September-recommended for use as soon as supplies available
- Coadministration with other vaccines allowed (limited data)

MMWR 72(29);793-801 July 21, 2023

GSK RSV vaccine efficacy

TABLE 1. Efficacy of 1 dose of GSK respiratory syncytial virus RSVpreF3 vaccine against respiratory syncytial virus–associated disease among adults aged ≥60 years — multiple countries, 2021–2023

Return

Efficacy evaluation period	Vaccine efficacy against outcome*	
	RSV-associated LRTD†	RSV-associated medically attended LRTD§
Season 1¶	82.6 (57.9–94.1)**	87.5 (58.9–97.6)††
Season 2§§	56.1 (28.2–74.4)††	—¶¶
Combined seasons 1 and 2 (interim)***	74.5 (60.0–84.5)†††	77.5 (57.9–89.0)††

MMWR 72(29);793-801 July 21, 2023

Pfizer RSV vaccine efficacy

TABLE 3. Efficacy of 1 dose of Pfizer respiratory syncytial virus RSVpreF vaccine against respiratory syncytial virus–associated disease among adults aged ≥60 years — multiple countries, 2021–2023

Return

Efficacy evaluation period	Vaccine efficacy against outcome, % (95% CI)*	
	RSV-associated LRTD†	RSV-associated medically attended LRTD§
Season 1¶	88.9 (53.6–98.7)	84.6 (32.0–98.3)
Season 2 (interim)**	78.6 (23.2–96.1)	—††
Combined seasons 1 and 2 (interim)§§	84.4 (59.6–95.2)	81.0 (43.5–95.2)

MMWR 72(29);793-801 July 21, 2023

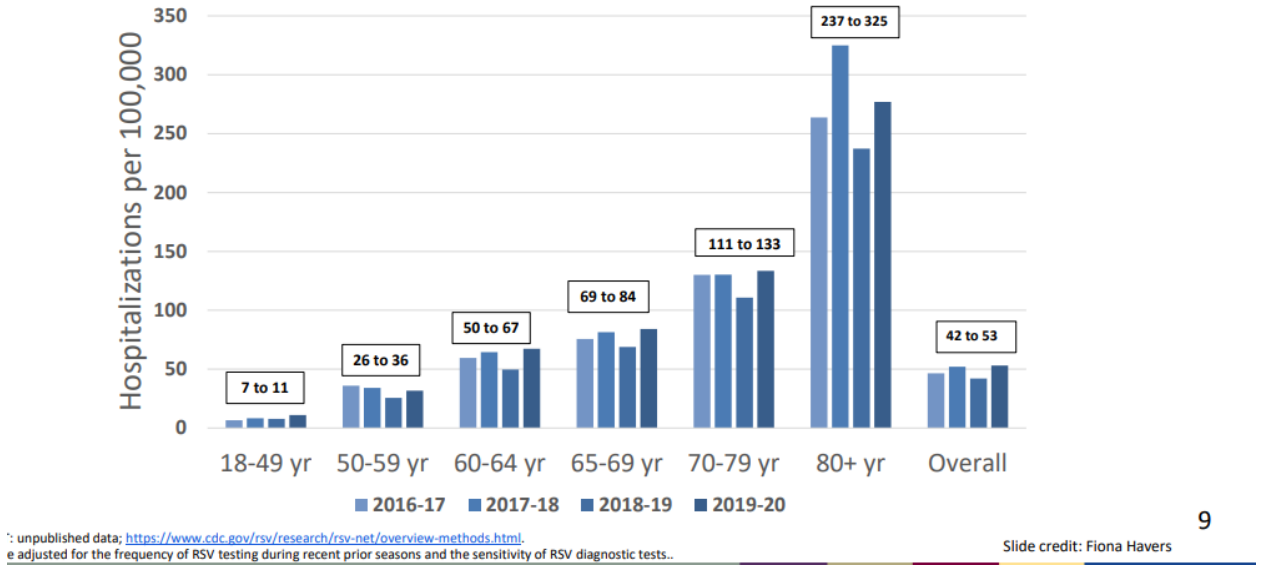
Why does the provider need to help each patient decide?

- Not very cost effective for everyone
- No data on duration of protection
- No data on ability to boost with a later dose
- A total of six cases of inflammatory neurologic events (Guillain-Barre, ADEM, others) occurred in the clinical trials
- Individual risk aversion

RSV vaccine for seniors

Who needs RSV vaccine the most?

RSV-associated hospitalization rates by adult age group, RSV-NET 2016–2020



': unpublished data; https://www.cdc.gov/rsv/research/rsv-net/overview-methods.html.
e adjusted for the frequency of RSV testing during recent prior seasons and the sensitivity of RSV diagnostic tests..

Slide credit: Fiona Havers

Two different vaccines (GSK/Pfizer)

Single dose required before RSV season

You can choose either vaccine

Recommended based on shared clinical decision making

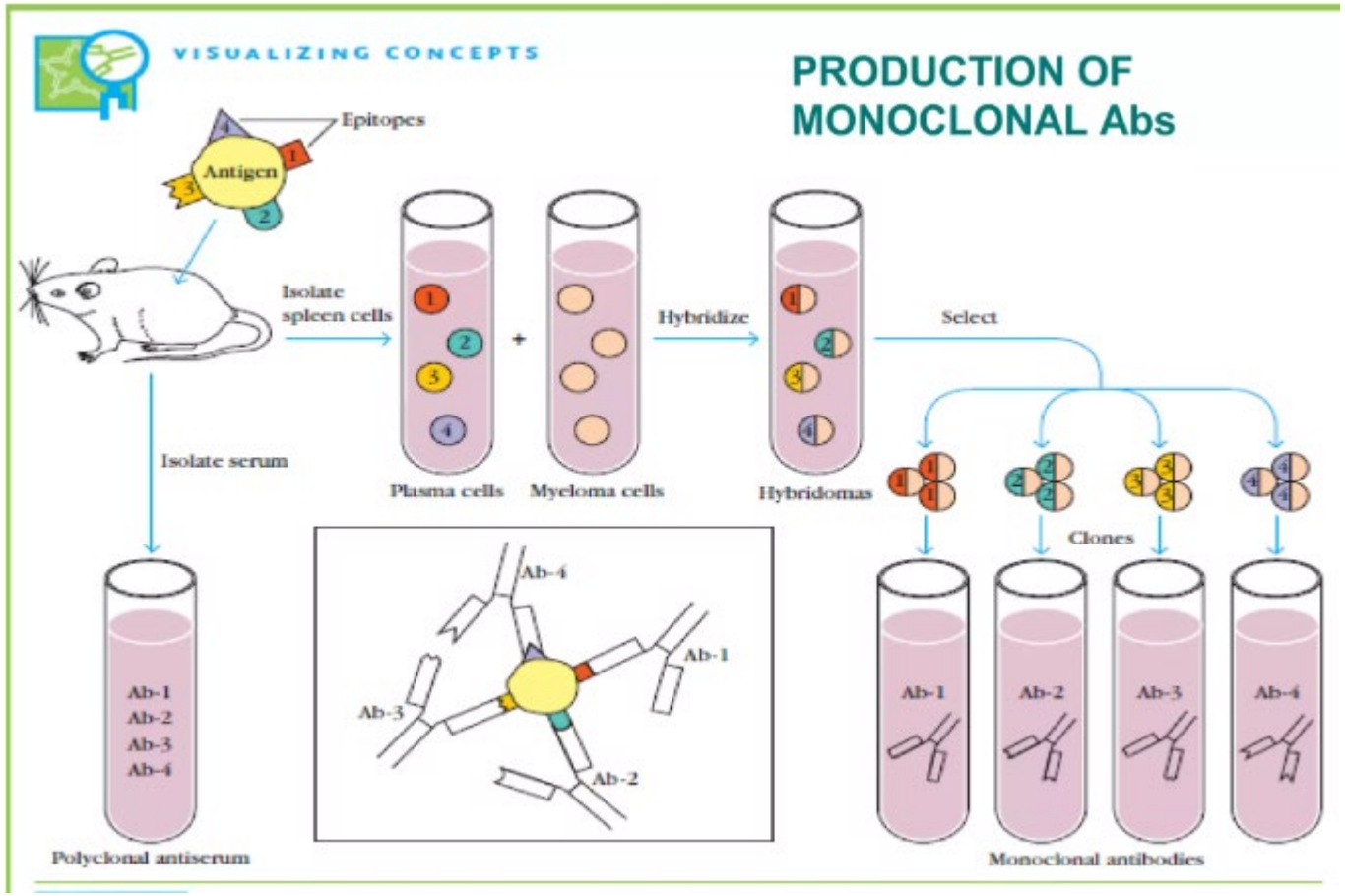
- Assess risk and benefit
- Offer it to anyone 60 years and older who wants it

Risk factors for RSV infection in adults 60 years and older

- Chronic lung or heart disease
- Asthma
- Diabetes
- Chronic kidney disease
- Chronic neurologic conditions
- Immunocompromised people
- Residents of long-term care facilities

MMWR 72(29);793-801 July 21, 2023

What is a monoclonal antibody?



- Monoclonal antibodies are a manufactured immune response that work instantly
- Specifically react with one protein

RSV prevention in infants: Nirsevimab

- Monoclonal antibody for passive immunization
- Replacement for palivizumab
- Requires only one dose for the entire RSV season
- Routinely recommended for infants 7 months or younger when entering the RSV season (e.g. October-November)
- Uncertain coverage by some programs
- Available in September?

Table 2. Medically Attended Lower Respiratory Tract Infections and Hospitalizations Associated with Respiratory Syncytial Virus (RSV) through 150 Days after the Injection.*

End Point and Analysis	Nirsevimab (N=994)	Placebo (N=496)	Efficacy (95% CI)†	P Value
	no. (%)			
Medically attended RSV-associated lower respiratory tract infection			74.5 (49.6 to 87.1)	<0.001
Poisson regression with robust variance				
Observed events	12 (1.2)	25 (5.0)		
Participants with imputation of data‡	15 (1.5)	6 (1.2)		
Hospitalization for RSV-associated lower respiratory tract infection			62.1 (−8.6 to 86.8)	0.07
Poisson regression with robust variance				
Observed events	6 (0.6)	8 (1.6)		
Participants with imputation of data‡	15 (1.5)	6 (1.2)		

Melody trial NEJM 2022; 386:837-46

RSV-Maternal Immunization

RSV-Positive Severe MA-LRTI	Maternal Vaccine Group (as Randomized) RSVpreF 120 µg (N[a]=3495)	Placebo (N[a]=3480)	
Time Interval	Number of Cases (%)	Number of Cases (%)	Vaccine Efficacy[b] (%) (CI*)
90 Days after birth	6 (0.2)	33 (0.9)	81.8 (40.6, 96.3)
120 Days after birth	12 (0.3)	46 (1.3)	73.9 (45.6, 88.8)
150 Days after birth	16 (0.5)	55 (1.6)	70.9 (44.5, 85.9)
180 Days after birth	19 (0.5)	62 (1.8)	69.4 (44.3, 84.1)
RSV-Positive MA-LRTI			
Time Interval	Number of Cases (%)	Number of Cases (%)	Vaccine Efficacy[b] (%) (CI*)
90 Days after birth	24 (0.7)	56 (1.6)	57.1 (14.7, 79.8)
120 Days after birth	35 (1.0)	81 (2.3)	56.8 (31.2, 73.5)
150 Days after birth	47 (1.3)	99 (2.8)	52.5 (28.7, 68.9)
180 Days after birth	57 (1.6)	117 (3.4)	51.3 (29.4, 66.8)

Munjal-ACIP presentation February 2023

FDA approval for RSV vaccine during pregnancy 8/21/2023

- Only applies to the Pfizer vaccine (Abrysvo)
- Approved a single dose between 32-36 weeks gestation
- Possible slight increase in pre-term births in vaccine recipients
- Awaiting ACIP guidance

Nirsevimab vs maternal RSV vaccination considerations

- Timing relative to the RSV season
- Onset of protection
- Implementation-newborn hospital vs prenatal visits
- Breadth of the immune response
- Duration of antibody/transplacental transfer of antibody
- Acceptance and adverse events of maternal vaccination
- Prevention of maternal RSV disease
- Cost

Nirevimab vs maternal vaccine timing (RSV season Oct-March)

Birth month	Nirsevimab administration	Maternal antibody level when RSV season starts
January	January (at birth)	Peak level
February	February (at birth)	Peak level
March	March (at birth)	Peak level
April	October (6 month visit)	6 months old
May	October (5 month visit)	5 months old
June	October (4 month visit)	4 months old
July	October (3 month visit)	3 months old
August	October (2 month visit)	2 months old
September	October (1 month visit)	1 months old
October	October (at birth)	Peak level
November	November (at birth)	Peak level
December	December (at birth)	Peak level

Stay tuned for RSV vaccine for infants

COVID Vaccines

Who should get another dose of vaccine this fall?

Audience response

Are you planning to get the new updated COVID vaccine this fall?

A) Yes, no matter what

B) No

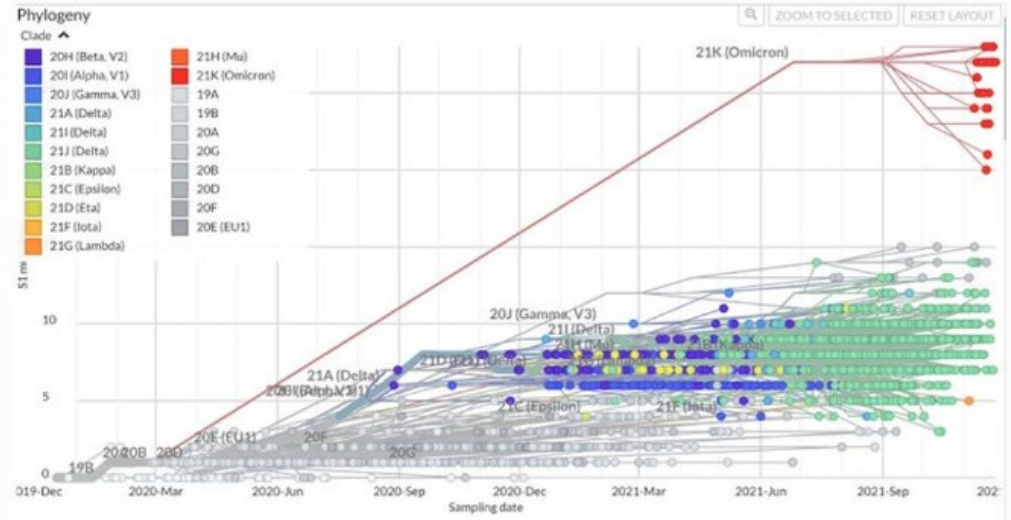
C) If it is recommended for me

D) I don’t know

What's in a name?

Alpha, Delta, Omicron, XBB 1.5, EG.5

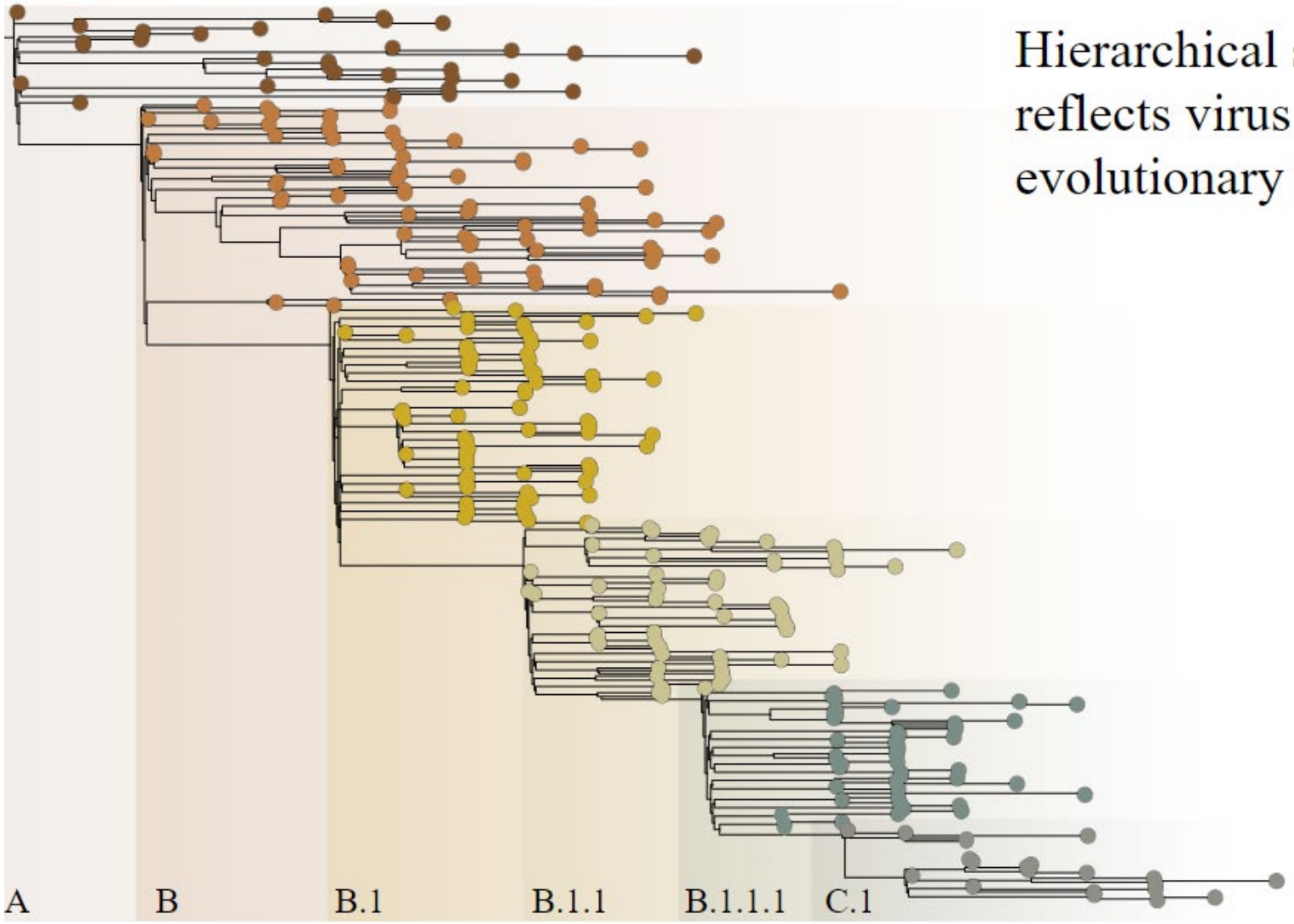
- Lineage-groups of viruses
  - Delta, Omicron
- Sublineage (BA.2,BA.2.75)
  - Related to each other
- Variant-contains genetic change



Time course for the evolution of significant SARS-CoV-2 variants, note the considerable divergence ... [+]

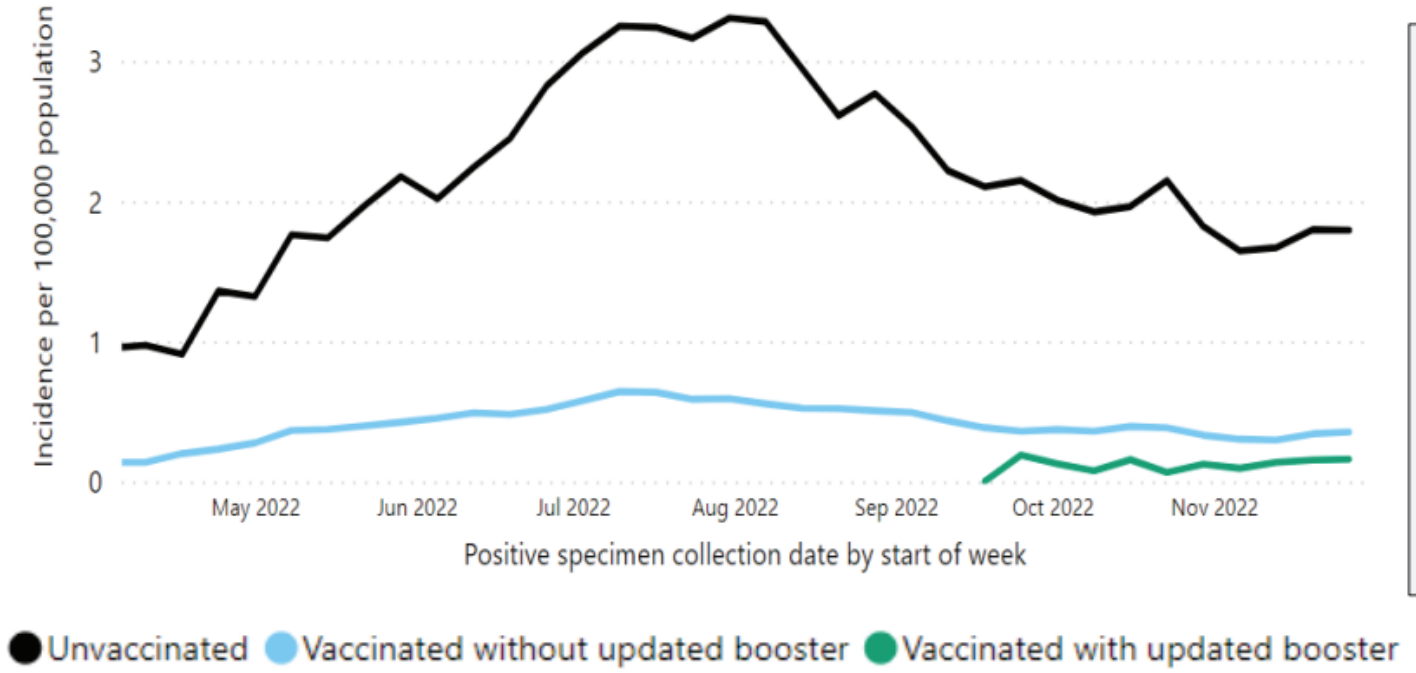
https://www.forbes.com/sites/williamhaseltine/2022/01/26/birth-of-the-omicron-family-ba1-ba2-ba3-each-as-different-as-alpha-is-from-delta/?sh=2abc3d6b3da9

PANGO nomenclature



Hierarchical system reflects virus evolutionary history

Death rates by vaccination status and receipt of bivalent booster doses among people ages 5 years and older April 3 – December 3, 2022 (23 U.S. Jurisdictions)



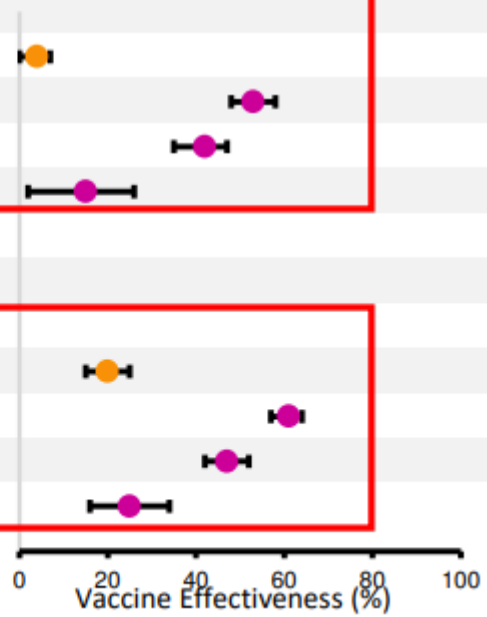
In November 2022, people ages 5 years and older with **bivalent booster** had **12.7 times lower risk of dying** from COVID-19, compared to **unvaccinated people** and **2.4 times lower risk of dying** from COVID-19 than people **vaccinated without a bivalent booster**

*Includes either a booster or additional dose. Updated booster = Bivalent booster

CDC COVID Data Tracker. https://covid.cdc.gov/covid-data-tracker/#rates-by-vaccine-status Accessed February 10, 2023

VISION: *Absolute* VE of monovalent and bivalent booster against *ED/UC encounters* among immunocompetent adults aged ≥18 years, by age group – September 2022 – March 2023*

mRNA Dosage Pattern	Total tests	SARS-CoV-2-test-positive, N (%)	Median interval since last dose, days (IQR)	Adjusted VE (95% CI)
Aged 18-64 years				
Unvaccinated (ref)	55,418	5,699 (10)	--	Ref
Monovalent doses only, last dose ≥2 months earlier	81,766	8,518 (10)	391 (311-518)	**4 (0-7)**
Bivalent booster, 7-59 days earlier	6,744	399 (6)	33 (20-46)	**53 (48-58)**
Bivalent booster, 60-119 days earlier	5,834	428 (7)	84 (71-100)	**42 (35-47)**
Bivalent booster, 120-179 days earlier	2,352	243 (10)	139 (129-153)	**15 (2-26)**
Aged ≥65 years				
Unvaccinated (ref)	10,559	1,833 (17)	--	Ref
Monovalent doses only, last dose ≥2 months earlier	42,019	5,721 (14)	343 (215-441)	**20 (15-25)**
Bivalent booster, 7-59 days earlier	9,103	724 (8)	35 (21-47)	**61 (57-64)**
Bivalent booster, 60-119 days earlier	9,086	935 (10)	86 (73-101)	**47 (42-52)**
Bivalent booster, 120-179 days earlier	3,857	483 (13)	139 (129-153)	**25 (16-34)**

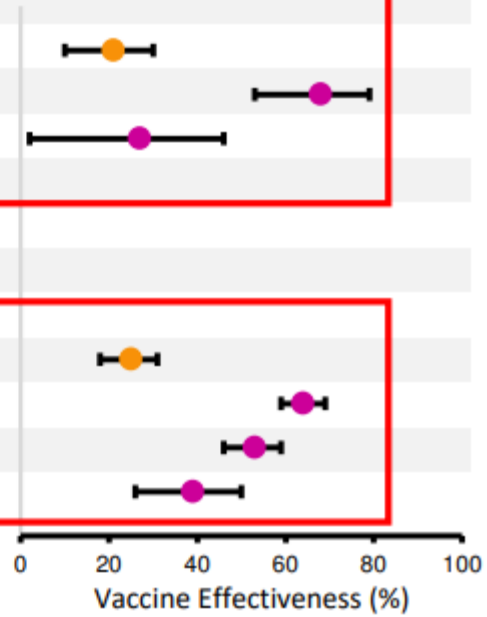


*Unpublished CDC data

https://www.cdc.gov/vaccines/acip/meetings/ April 2023 ACIP meeting-Link Gellis

VISION: *Absolute* VE of monovalent and bivalent booster against *hospitalization* among immunocompetent adults aged ≥18 years, by age group – September 2022 – March 2023*

mRNA Dosage Pattern	Total tests	SARS-CoV-2-test-positive, N (%)	Median interval since last dose, days (IQR)	Adjusted VE (95% CI)
Aged 18-64 years				
Unvaccinated (ref)	7,126	565 (8)	--	Ref
Monovalent doses only, last dose ≥2 months earlier	9,621	659(7)	388 (300-522)	**21 (10-30)**
Bivalent booster, 7-59 days earlier	839	28 (3)	33 (21-46)	**68 (53 to 79)**
Bivalent booster, 60-119 days earlier	746	56 (8)	84 (70-101)	**27 (2 to 46)**
Bivalent booster, 120-179 days earlier	268	21 (8)	137 (128-150)	**
Aged ≥65 years				
Unvaccinated (ref)	6,687	1,132 (17)	--	Ref
Monovalent doses only, last dose ≥2 months earlier	20,474	2,735 (13)	354 (232-460)	**25 (18 to 31)**
Bivalent booster, 7-59 days earlier	3,494	264 (8)	35 (21-47)	**64 (59 to 69)**
Bivalent booster, 60-119 days earlier	3,561	358 (10)	86 (73-102)	**53 (46 to 59)**
Bivalent booster, 120-179 days earlier	1,472	158 (11)	139 (128-152)	**39 (26 to 50)**



*Unpublished CDC data. **Not included due to imprecise estimates (confidence intervals >50 percentage points).

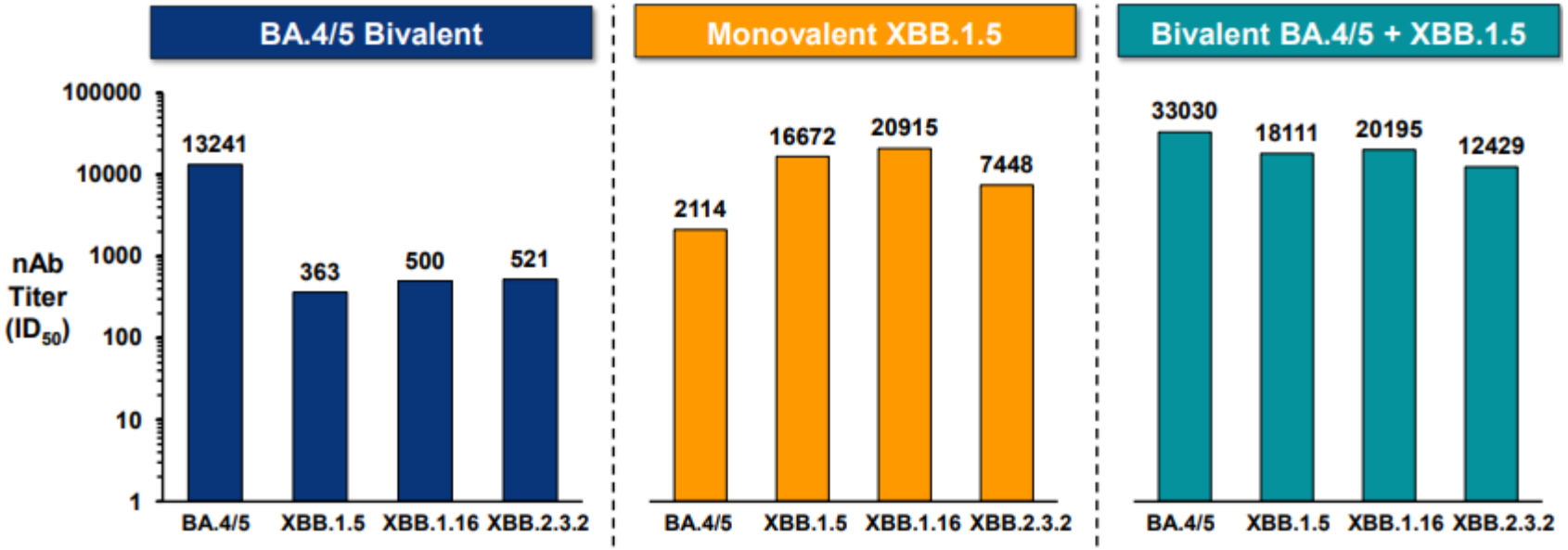
https://www.cdc.gov/vaccines/acip/meetings/ April 2023 ACIP meeting-Link Gellis

New COVID Vaccine

FDA s

CC

Neutralizing Antibody Titers in Mice 14 Days after Primary Series of XBB.1.5-Containing Vaccines



Monovalent and bivalent XBB.1.5-containing vaccines effectively drive neutralization of XBB subvariant viruses

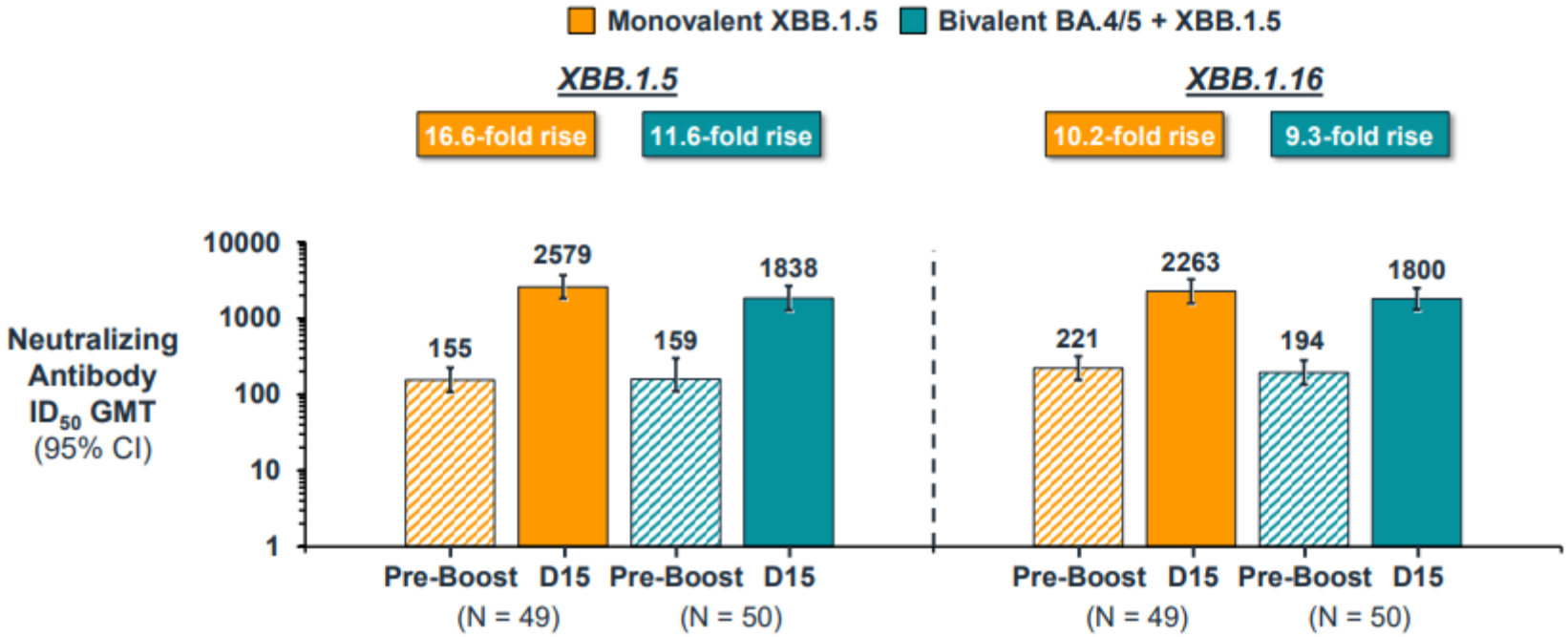
VRBPAC meeting June 2023

New COVID Vaccine

FDA

XBB.1.5 and XBB.1.16 Neutralizing Antibodies After 5th Dose (3rd Booster) of XBB-Containing Vaccines in Adults

Study 205J, Per-Protocol Immunogenicity Set – All Participants



VRBPAC meeting June 2023

COVID Vaccine Safety

VAERS reporting rates of myocarditis (per 1 million doses administered) after mRNA COVID-19 vaccination, days 0–7 and 8–21 post-vaccination*,†

		0–7 days			8–21 days			0–7 days			8–21 days		
		Males			Males			Females			Females		
	Age (yrs)	Dose 1	Dose 2	Booster	Dose 1	Dose 2	Booster	Dose 1	Dose 2	Booster	Dose 1	Dose 2	Booster
Pfizer-BioNTech	5–11	0.2	2.6	0.0	0.6	0.0	0.0	0.2	0.7	0.0	0.2	0.0	0.0
Pfizer-BioNTech	12–15	5.3	46.4	15.3	1.2	1.2	0.9	0.7	4.1	0.0	0.4	0.2	0.9
Pfizer-BioNTech	16–17	7.2	75.9	24.1	1.7	3.2	1.3	0.0	7.5	0.0	0.7	0.4	0.0
Pfizer-BioNTech and Moderna	18–24	4.2	38.9	9.9	1.1	2.2	0.4	0.6	4.0	0.6	0.2	0.7	0.0
Pfizer-BioNTech and Moderna	25–29	1.8	15.2	4.8	0.4	1.1	0.5	0.4	3.5	2.0	0.2	0.0	0.8
Pfizer-BioNTech and Moderna	30–39	1.9	7.5	1.8	0.4	0.8	0.2	0.6	0.9	0.6	0.3	0.2	0.0
Pfizer-BioNTech and Moderna	40–49	0.5	3.3	0.4	0.2	0.5	0.0	0.4	1.6	0.6	0.2	0.2	0.0
Pfizer-BioNTech and Moderna	50–64	0.5	0.7	0.4	0.2	0.3	0.1	0.6	0.5	0.1	0.2	0.5	0.1
Pfizer-BioNTech and Moderna	65+	0.2	0.3	0.6	0.3	0.2	0.1	0.1	0.5	0.1	0.1	0.2	0.1

* As of May 26, 2022; reports verified to meet case definition by provider interview or medical record review; primary series and 1st booster doses only

† An estimated 1–10 cases of myocarditis per 100,000 person years occurs among people in the United States, regardless of vaccination status; adjusted for days 0–7 and 8–21 risk intervals, this estimated background is **0.2 to 2.2 per 1 million person-day 0–7 risk interval and 0.4 to 3.8 per 1 million person-day 8–21 risk interval** (peach shaded cells indicate that reporting rate exceeded estimated background incidence for the period)

Shimabakuro, ACIP meeting 6-23-2022

COVID vaccines in children

- Recommended for all children 6 months of age and older
- Product, dose, and interval varies by age and underlying health condition
- Local adverse events (fever, erythema or pain at the injection site, decreased energy) are common
- Myocarditis is the only significant serious adverse event. It is rare in 12-18 year olds and even more rare in younger age groups
- All adverse events more common after dose #2. Less common after boosters
- Immunity wanes over time
- Bivalent vaccines available for all 6 months of age and older

COVID vaccine in pregnant women-why is it important

Interventions and outcomes among pregnant patients with respiratory symptoms and a positive SARS-CoV-2 test

The proportion requiring ICU admission and vasopressor support decreased over time

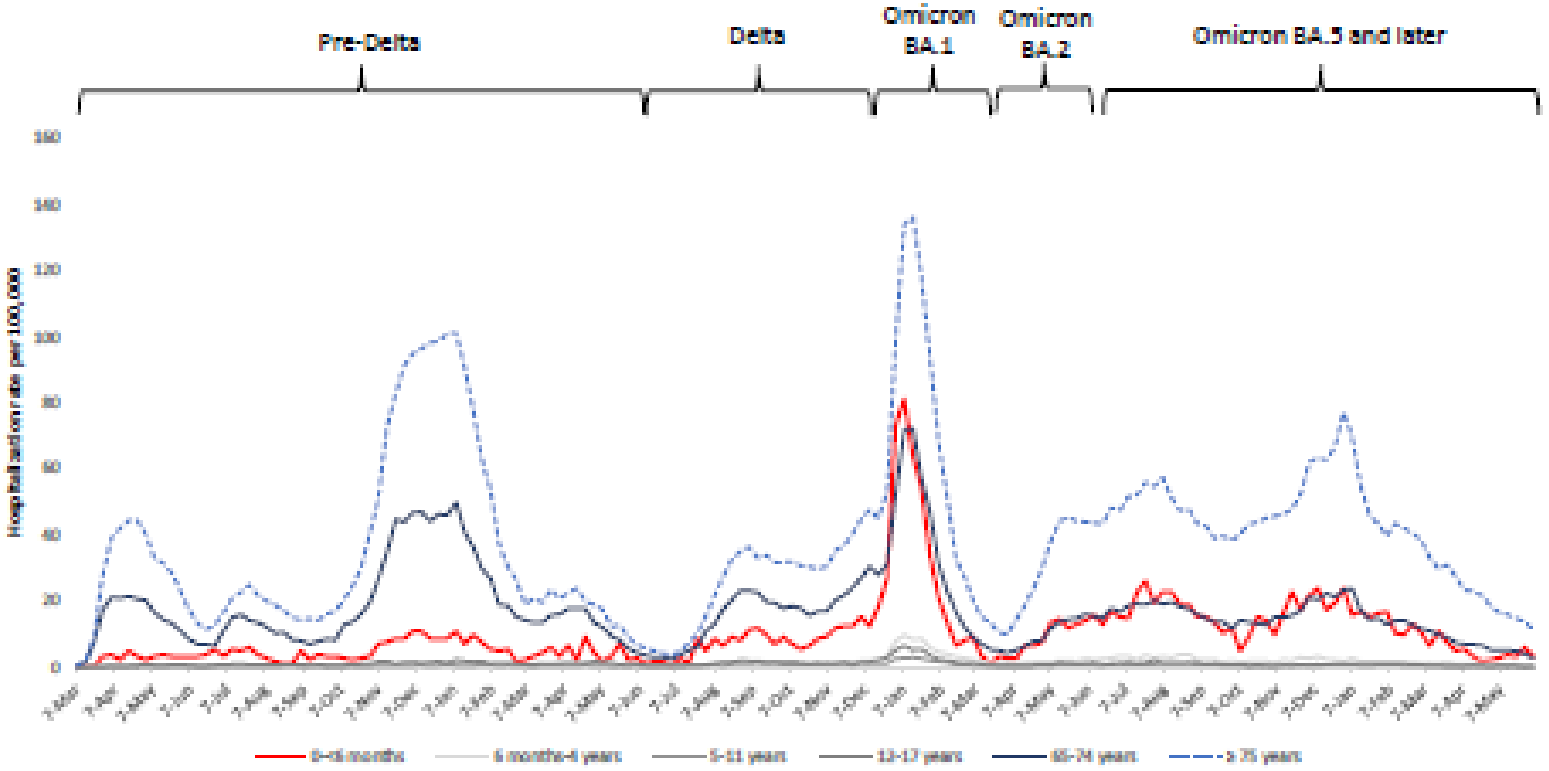
	January – November 2021 (pre-Omicron) N (%)*	December 2021 – June 2022 (early Omicron) N (%)*	July 2022 – April 2023 (later Omicron) N (%) *
Total Number	184	99	80
Interventions			
High flow nasal cannula	20 (12)	2 (2)	0 (0)
BIPAP/CPAP	5 (2)	1 (1)	1 (3)
Mechanical ventilation	15 (7)	3 (2)	1 (2)
Vasopressor	26 (15)	3 (2)	3 (6)
Dialysis or RRT	1 (0.5)	1 (1)	0 (0)
Severe outcomes			
ICU admission	31 (17)	7 (6)	2 (4)
In-hospital death	0 (0)	1 (1)	0 (0)

*Note that percentages are weighted to account for sampling scheme.

Havers-ACIP Meeting June 2023

COVID vaccine in pregnant women-why is it important

Infants <6 months old had similar COVID-19–associated hospitalization rates to adults aged 65–74 years old



Source: COVID-NET: https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covid-net/purpose-methods.html. Data March 1, 2020 through March 31, 2023. Pre-Delta: March 1, 2020 – June 19, 2021; Delta: June 20–December 18, 2021; Omicron BA.1: December 19, 2021–March 19, 2022; Omicron BA.2: March 20–June 18, 2022; Omicron BA.5 (June 19, 2022–June 3, 2023)

Effectiveness of maternal immunization with COVID-19 monovalent mRNA vaccine (VE) in preventing hospitalizations for Omicron subvariant COVID-19 in infants age <6 months

Setting, Dates of Illnesses	Group, variant period	Doses of COVID-19 vaccine	% VE (95% CI)
30 Pediatric Hospitals, US 5/21-3/22	Omicron period Vaccinated > GA 20 weeks ICU (Delta + Omicron periods)	2 during pregnancy	**38** (8-58) 57 (25-75) 70 (42-85)
Ottawa, Canada Population-based 5/21-9/22*	Omicron period	2 (≥1 during pregnancy) 3 (≥1 during pregnancy)	**53** (39-64) **80** (64-89)
Kaiser Permanente Northern California 6/21-11/22*	Delta + Omicron periods	≥2 during pregnancy vs. unvaccinated	(n = 10; Incidence per 100K PY: 21 vs. 100)

Halasa NB et al. www.nejm.org/doi/10.1056/NEJMoa2204399; Jorgensen SCJ er al., www.bmj.com/content/380/bmj-2022-074035; Zerbo O et al., www.nature.com/articles/s41467-023-36547-4

COVID Vaccine FAQ

- Vaccine products are NOT interchangeable for children under 5 (Moderna) or 6 (Pfizer) years of age
- Either mRNA bivalent vaccine can be used for subsequent vaccine doses in those 7 years and older
- People who have received one dose of Novavax should subsequently receive one of the mRNA bivalent vaccines
- No minimum interval to vaccinate following natural infection but can wait up to 90 days
- Coadministration with other vaccines is allowed and even recommended
- AAP/CDC recommend giving the dose appropriate for age on the day of vaccination

The near future of COVID vaccines

- EUA to licensure?
- Changing formulations
- Single dose vials
- Private purchase
- Continued public purchase
  - VFC
  - Bridging program for uninsured
  - Vaccines for Adults Program?

COVID-19 Vaccine Timing–Routine Schedule

Vaccinate ALL 58

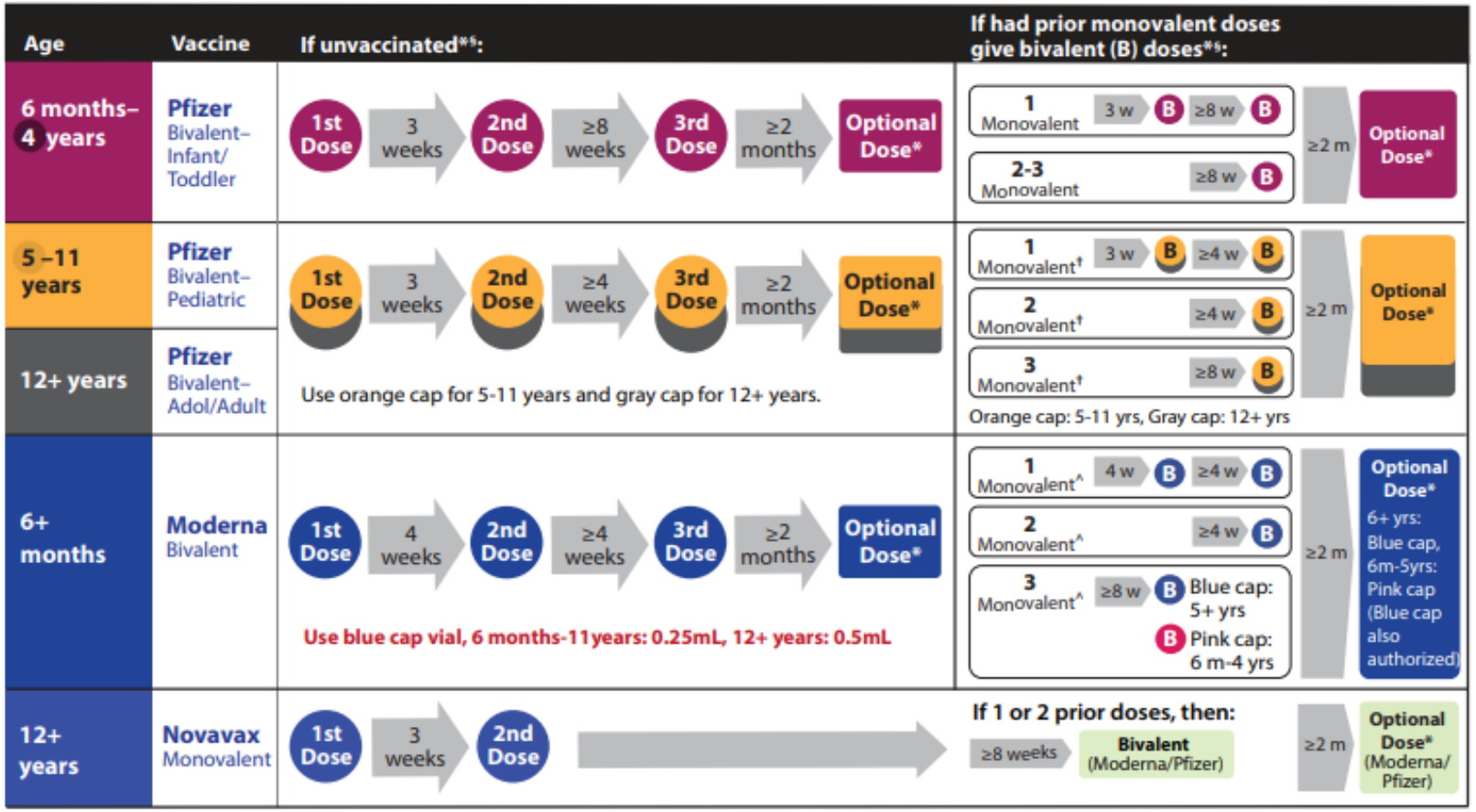
Age*	Vaccine	If unvaccinated:	If had monovalent doses give bivalent (B) doses:
6 months–4 years	Pfizer–Infant/Toddler Bivalent	1st Dose → 3-8 weeks** → 2nd Dose → ≥8 weeks → 3rd Dose	If 1 prior dose, then: 3-8** weeks B ≥8 weeks B If 2-3 prior doses, then: ≥8 weeks B
6 months–5 years	Moderna–Bivalent	1st Dose → 4-8 weeks** → 2nd Dose Use blue cap vial, 0.25mL	If 1 prior dose, then^: 4-8** weeks B Blue cap, 0.25mL If 2 prior doses then^: ≥2 months B Pink cap, 0.2mL

https://eziz.org/assets/docs/COVID19/IMM-1396.pdf

COVID-19 Vaccine Timing if Moderately/Severely Immunocompromised

Vaccinate ALL 58

Children and Adolescents (Ages 6 months–17 years)



* An **optional dose** may be given ≥2 months after the last dose. **Further doses** may be given at the healthcare provider's discretion. See Table 2 for vial and dosage.

§ Heterologous "mix-and-match" dosing is allowed for ages 6 years and older.

† Children 5 years of age who had 1 or more doses of Pfizer monovalent vaccine are only eligible to receive Pfizer bivalent vaccine.

^ Children 5 years of age who had 1 or more doses of Moderna monovalent vaccine may receive Moderna or Pfizer bivalent vaccine.

View Interim Clinical Considerations for Use of COVID-19 Vaccines for details. Schedule is subject to change.

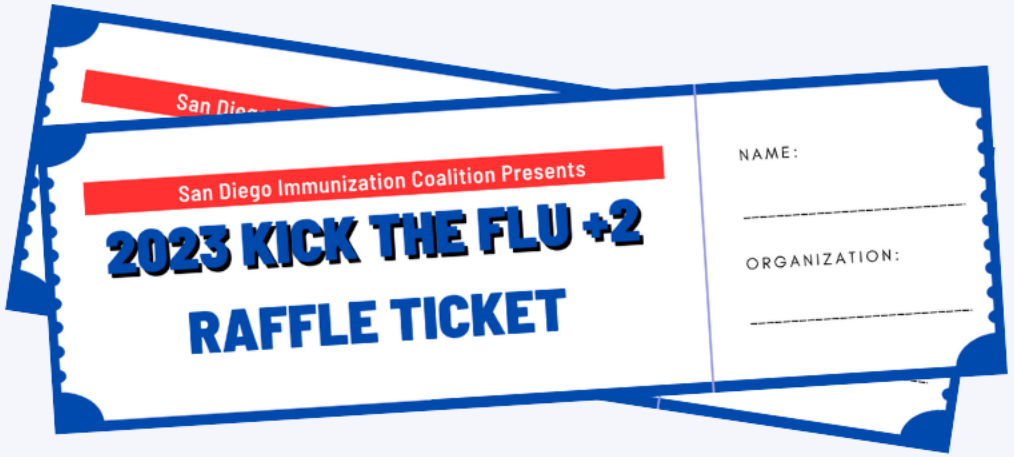
Summary

- We still have work to do in protecting our community against influenza
- Lots of new ways to prevent another respiratory virus, RSV
- New and improved COVID vaccine coming within weeks
- Big challenge to provide influenza, RSV, and COVID prevention to all who need it before the winter

THANK YOU!

The Public Health Services department, County of San Diego Health and Human Services Agency, has maintained national public health accreditation, since May 17, 2016, and re-accredited by the Public Health Accreditation Board on August 21, 2023.

RAFFLE TIME!


San Diego Immunization Coalition Presents
2023 KICK THE FLU +2
RAFFLE TICKET
NAME:
ORGANIZATION:


SDIC


SDIC

15 MIN BREAK

Jerome Sigua, MD

Dr. Jerome Sigua is a Senior Medical Science Liaison at Sanofi Vaccines in the US Medical Affairs department. He has previously served as a pediatric immunologist at the Memorial Healthcare System in Florida and staff physician at the VA San Diego Healthcare System. He earned his medical degree at the State University of New York, Downstate College of Medicine in Brooklyn, NY. He completed his Internal Medicine residency at Dartmouth-Hitchcock Medical Center, followed by an Allergy/Immunology fellowship at the Medical College of Wisconsin. He is board certified in both specialties.

Please note that Dr. Sigua is unable to publicly distribute his PowerPoint presentation due to Sanofi's policy.
For more information, please contact Ashley.McKay1@sdcounty.ca.gov

Kenneth Morris, MD, FAAP

Dr. Kenneth Morris is the Chief Medical Officer for Children's Primary Care Medical Group (CPCMG). He received his medical degree from the Medical College of Wisconsin and completed his pediatric internship and residency at UCSD. One of his proudest early accomplishments was helping to raise the center's two-year-old immunization rates from 55% to 90% over a period of 2 years while focusing on missed opportunities. This launched a career long interest partnering with several quality projects that would help improve immunization rates in the San Diego community.

As CPCMG's first Chief Medical Officer, Dr. Morris established a new standard for combination vaccines and uniform vaccine scheduling throughout the 29 sites of the group. In late 2020, after development and distribution of a COVID-19 vaccine and while leveraging past lessons learned, Dr. Morris and his team championed administration of the vaccine first for clinicians and staff and then for patients through Town Halls and grass roots conversations in an effort to help conquer COVID-19.

Clinic Considerations for Influenza, COVID-19 & RSV Vaccinations/Injectables

Kenneth Morris, MD, FAAP

Chief Medical Officer

Children's Primary Care Medical Group

Presented at
San Diego Immunization Coalition *Kick the Flu + 2* Summit
August 30, 2023

Objectives

1. Understand vaccine funding sources and eligibility and their impact on vaccine supply
2. Discuss COVID-19 commercialization and its expected impacts on COVID-19 vaccine administration
3. Describe important clinic considerations for a successful mass vaccination program
4. Learn best practices for ordering, storing, distributing and administering multiple vaccines
5. Describe strategies for increasing immunization rates for Flu, COVID-19 and RSV

Vaccine Funding Sources

LHD/CDPH Approved Sites

- Vaccines for Children (VFC)*
  - Influenza
- State General Fund (SGF)
  - Influenza
- Routine 317 (VFA)*
- Outbreak 317

Private Vaccine Market

*Eligibility requirements

VACCINE ELIGIBILITY GUIDELINES | IMMUNIZATION BRANCH

For Health Departments and CDPH Approved Health Department Authorized Sites, ***Effective 10/1/2022 through 9/30/2023***

	VFC Funded Vaccines[1] (VFC)	Routine 317 Funded Vaccines[2] (317)	Outbreak/Special Situation 317 Funded Vaccines[2] (317)	State General Fund Vaccines[3] (State)
Age	**Children** Birth Through 18 Years of Age meeting any of these eligibility criteria:	**Adults** 19 Years of Age and older meeting one of the following eligibility criteria:	**Children and Adults** (All ages)	**Children and Adults** (All ages)
Eligibility	• Medi-Cal/CHDP eligible • Uninsured (no health insurance) • American Indian & Alaskan Native	• Uninsured (no health insurance) • Underinsured (Eligible only if listed vaccines are not covered by insurance)	Fully Insured (ONLY if approved by health officer and CDPH for outbreak control, post-exposure prophylaxis, or disaster relief efforts) ⚠	
Vaccine	DTaP			
	Hepatitis A	Hepatitis A	Hepatitis A[6]	Hepatitis A[6]
	Hepatitis B	Hepatitis B[4]	Hepatitis B[6] **ONLY** if they are a household or sexual contact of HbsAg+ pregnant woman	
	Hib			
	HPV	HPV		
	Influenza			Influenza
	Meningococcal Conjugate (MCV4)	Meningococcal Conjugate (MCV4)	Meningococcal Conjugate (MenACWY)[6]	
	Men B		Men B[6]	
	MMR	MMR	MMR[6]	
	Pneumococcal Conjugate (PCV13)	Pneumococcal Conjugate (PCV20)		
	Pneumococcal Conjugate (PCV15)			
	Pneumococcal Polysaccharide (PPSV23)			
	Polio (IPV)			
	Rotavirus			
	Td	Td **ONLY** when Tdap is not indicated[5]		
	Tdap	Tdap	Tdap[6]	Tdap (children only)
	Varicella	Varicella	Varicella[6]	
		Zoster		

[1]VFC-funded vaccines may be used to immunize underinsured children ONLY if the LHD has a FQHC or RHC designation. Otherwise, underinsured children presenting to a LHD clinic or HDAS must be referred to a FQHC or RHC.
[2]Fully insured children and adults are not eligible to receive 317 vaccine routinely (adults enrolled in Medi-Cal/Medi-Cal managed care plans are considered fully insured). 317 vaccine may not be used in travel clinic settings.
[3]Depending on funding, State General Fund vaccines may vary.
[4]Adults with Medicare Part B (without Part D) are eligible if they are at low-risk for Hepatitis B. See http://eziz.org/assets/docs/IMM-1247.pdf for more details.
[5]Adults with Medicare Part B (without Part D) are eligible if they are receiving it as a routine vaccine (i.e., do not have a wound). See http://eziz.org/assets/docs/IMM-1247.pdf for more details.
[6]For outbreak control, post-exposure prophylaxis, and/or mass vaccination preparedness efforts. Available as funding permits.

IMM-1142 (3/23)

Vaccine Funding Sources and Eligibility

VACCINE ELIGIBILITY GUIDELINES | IMMUNIZATION BRANCH

For Health Departments and CDPH Approved Health Department Authorized Sites, ***Effective 10/1/2022 through 9/30/2023***

	VFC Funded Vaccines[1] (VFC)	Routine 317 Funded Vaccines[2] (317)	Outbreak/Special Situation 317 Funded Vaccines[2] (317)	State General Fund Vaccines[3] (State)
Age	**Children** Birth Through 18 Years of Age meeting any of these eligibility criteria:	**Adults** 19 Years of Age and older meeting one of the following eligibility criteria:	**Children and Adults** (All ages)	**Children and Adults** (All ages)
Eligibility	• Medi-Cal/CHDP eligible • Uninsured (no health insurance) • American Indian & Alaskan Native	• Uninsured (no health insurance) • Underinsured (Eligible only if listed vaccines are not covered by insurance)	Fully Insured (ONLY if approved by health officer and CDPH for outbreak control, post-exposure prophylaxis, or disaster relief efforts) ⚠	

Pediatrics (0-18)

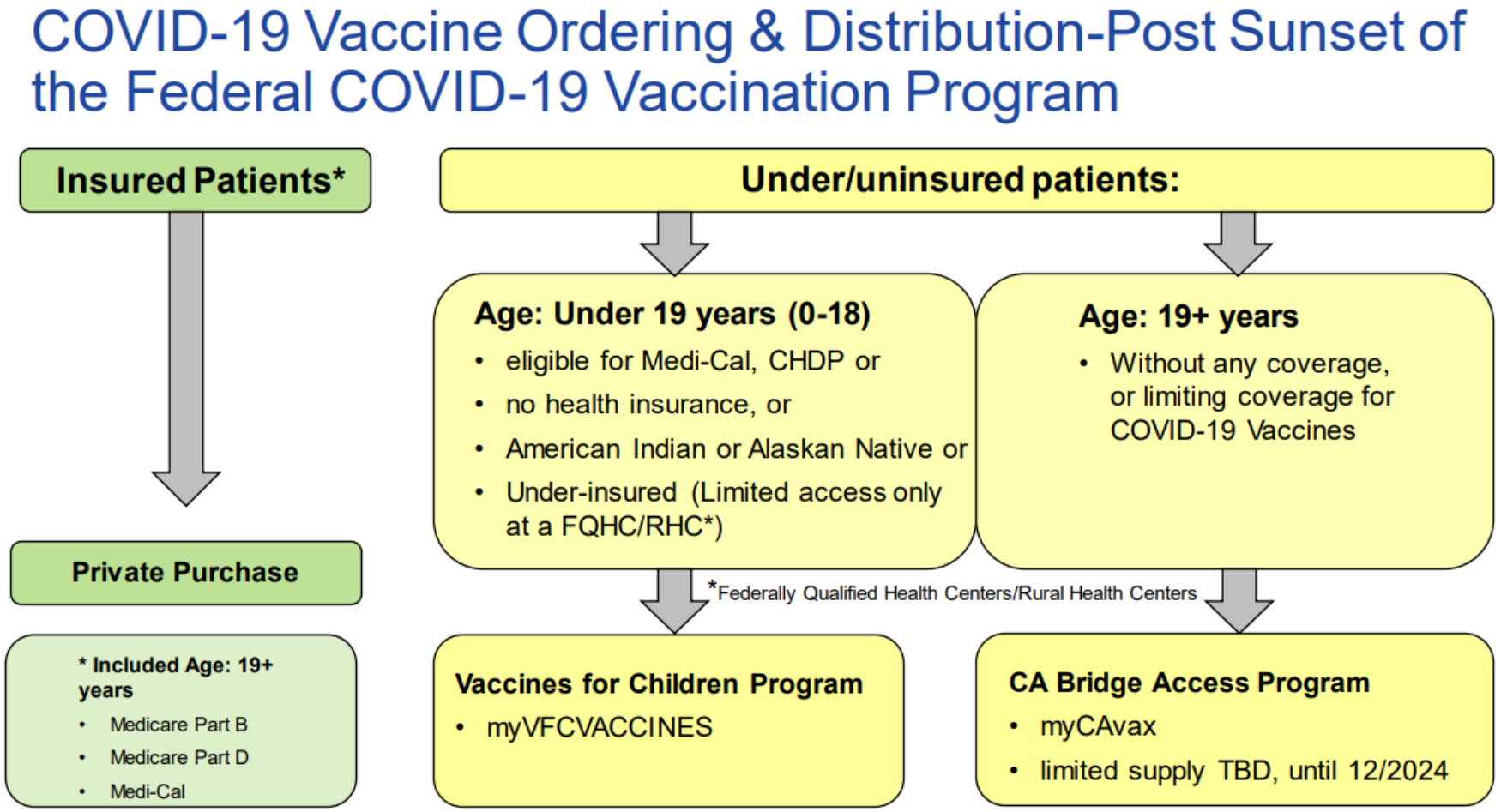
- State General Fund Vaccines(Flu)
- VFC Vaccines (Flu, COVID, RSV, MAb)
  - Uninsured, Medi-Cal/CHDP eligible, AI & AN
- Private Vaccines (Flu, COVID, RSV)
  - Private insurance

Adults (19+)

- State General Fund Vaccines (Flu)
- CA Bridge Access Program Vaccines (COVID)
  - Uninsured
- Private Vaccines (Flu, COVID, RSV)
  - For COVID, includes Medi-Cal, Medicare Part B and D, private insurance

Inclusion of RSV vaccine in State programs is undetermined at this time (but expected)

COVID-19 Commercialization Fall 2023



Operationalizing COVID-19 Commercialization

Pfizer, Moderna & Novavax COVID-19 Vaccine Presentations

Pfizer

Anticipated Presentations	30 MCG For 12 Years of Age and Older (30 mcg)	10 MCG For 5 Through 11 Years of Age (10 mcg)	3 MCG For 6 Months Through 4 Years of Age (3 mcg)
	NDC 00069-2362-10	NDC 59267-4331-02	NDC 59267-4315-02
	Single-dose vial and limited quantities of prefilled syringe[1]	Single-dose vial	Multi-dose vial (3 doses) - dilution required
	Minimum order: 100 doses (10x 10-vial box)	Minimum order: 10 doses (1x 10-vial box)	Minimum order: 30 doses (3x 10-vial box)

Moderna Anticipated presentations (pending FDA approval)

Ages 6 months to 11 years:
- single-dose vial of .25ml

Minimum Order: 10 doses

Shipped frozen, storage same as bivalent

Ages 12+:
- single-dose vials of .5 ml
- pre-filled syringes of .5 ml (box of 10)*
- pre-filled syringes of .5 ml (blister pack of 10)*

* May not be available in the CDC contract

Novavax: 5 dose multidose vials instead of single dose vials to ensure timely delivery. To address vaccine wastage concerns, 100% return allowance of opened and unopened vials. Min order of 50 doses, refrigerated shipping, storage same as original Novavax.

Operationalizing COVID-19 Commercialization

Considerations For Your Clinic

- Limit Vaccine Waste With Multi-Dose Vials: strategic scheduling
- Plan product ordering effectively with storage space considerations
  - Minimum Orders (Pfizer) *Note: information is subject to change*
    - 6mo – 4yr: 30 doses
    - 5yr -11yr VFC 10 doses / PVT 100 doses
    - 12yr + VFC 10 doses / PVT 100 doses
  - Ships at ultra low temp, storage same as bivalent Pfizer
- Plan and prioritize product types based on operations and patient population
- Administer concurrently with influenza vaccine during special clinics?
- Utilize tracking labels for doses and temperature limitations
- Limit Vaccine Waste: Don’t pre-draw vaccine!

Operationalizing COVID-19 Commercialization

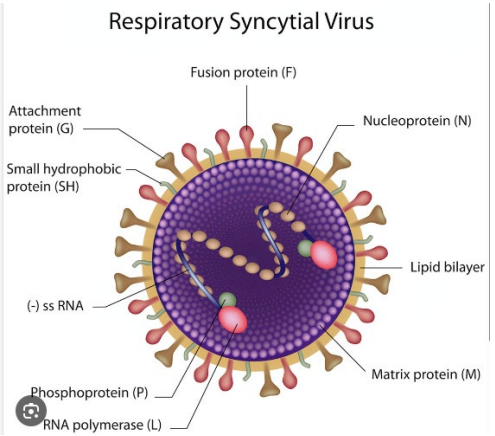
Planning

- Commercialization at a Glance: Provider Transition Guide
  - Summarizes HHS Commercialization Transition Guide & CDPH Guidance (continually updated, most recent 8/18/2023)
    - Fall Transition Timeline
    - Sunsetting of the Federal COVID-19 Vaccination Program
    - Commercialization of COVID-19 Vaccines
    - Anticipated Vaccination Schedule for the Fall
  - https://eziz.org/assets/docs/COVID19/IMM-1467.pdf

RSV Prevention: Upcoming Clinic Considerations

Considerations for your clinic (new Long-Acting Monoclonal Ab)

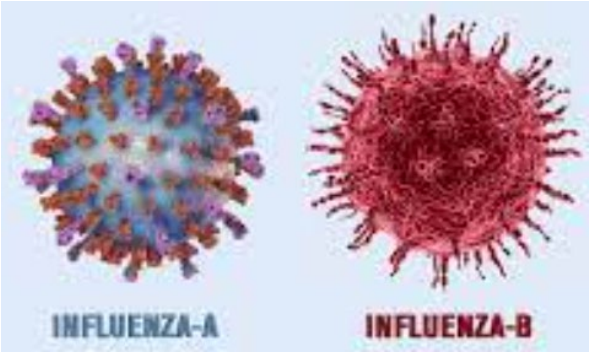
- Availability via all applicable funding sources (expected commercial lag)
  - Mother's insurance for the 1st month of life versus the baby's insurance?
- Transition of shorter acting MAb w/ auth process → new long acting MAb
- Identifying "high-risk" conditions & will auth be required for 2nd season?
- What if MOB received MAb during pregnancy? Info sharing issues…
- Scope of practice: administering vaccines vs other injectables?
- Availability at hospital/birth center newborn nurseries
- Integration into routine vaccine administration workflow
  - <5 kg (50 mg), ≥ 5 kg (100 mg), 2nd season (200 mg) dosing
- Storage
- Adapting EHR health maintenance/immunization forecasting along information exchange with vaccine registries

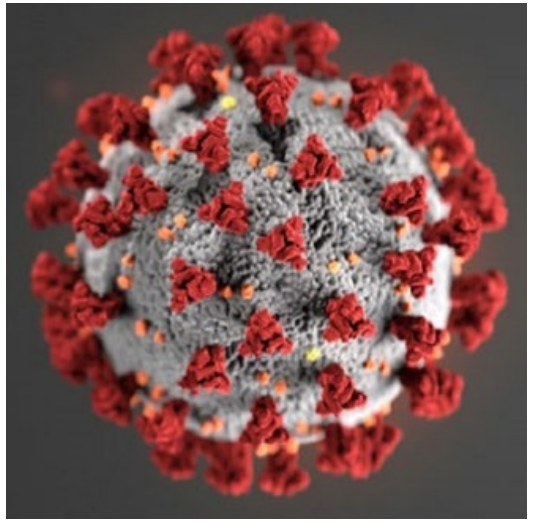


Flu & Covid: Plan & Prepare

Develop & Communicate Annual Vaccine Management Plan

- Include all stakeholders (IT, HR, Fiscal, Nursing, Ops, Training, Clinician, etc.)
- Flu inventory: determine choices & pre-book considerations & arrival date (s)
- Employee health considerations
- Develop & update standing orders
- Educating & updating staff
- Where to administer: routine visits, clinical support visits, after hours evening and weekend special clinics (local vs regional)
- Leveraging EHR for ordering, forecasting and outreaching
- When to start administration?: ticking time clock
    - Start when partial supply (one funding source) vs all funding sources?
        - Health equity considerations while minimizing staff confusion & potential errors





Flu & Covid:
Human Resource Bandwidth & Prioritization

Consider Staffing, Supply, Access & The Most Vulnerable

- Residual impact of the COVID-19 Pandemic: reduced clinical staff & those remaining are burned out from the multiple ID spikes.
- Staffing: MA's, LVN's, RN's and Clinicians
- With limited staff, minimal vaccine supply, prioritize patient groups considering eligibility requirements of vaccine funding source.
  - Young children (0-5), especially those < 3 y/o (no pharmacy access)
  - Older adults (65+)
  - Immunocompromised persons or those with comorbidities
  - Pregnant women

Best Practices for **Ordering** Flu, COVID-19 & RSV Injectables

- Build policy and procedure for insurance identification
- Manage product types, funding sources, and vaccination volume
- Order conservatively but efficiently, considering storage capacity
  - Multidose Vials → Increased Storage Capacity
  - Prefilled Syringes & Single Use Vials → Decreased Storage Capacity (but also with decreased concerns with wastage)

VFC Provider Request Form to Update Vaccine Brand Products Admi

VFC PIN		Name of person completing this form	
Practice Name	Children's Primary Care Medical Group		

Please fill in the form below with the brand name of the new vaccine you would like to use, along with the the brand name of the current vaccine you are using.

Vaccine Type	New Vaccine (Brand we want to use!)	Old Vaccine (Brand we do use anymore)
DTaP		
DTaP Combination Vaccines		
Hepatitis A		
Hepatitis B		
Hib		
HPV		
IPV		
Meningococcal B		
Meningococcal Conjugate		
MMR		
MMRV		
Pneumococcal Conjugate	Vaxneuvance(PCV15) for dose 1,2,& 3 / Prevnar20 (PCV20) for dose 4	Prevnar13 - PCV13
Pneumococcal Polysaccharide		
Rotavirus		
Td		
Tdap		
Varicella		

Best Practices for **Storing** Flu, COVID-19 & RSV Injectables

- Ideal: separate fridges for different funding sources
- Next Best:
  - Separate shelves or areas within a fridge for VFC and private vaccine
  - Use labeling tools/bins to differentiate funding source types
- Monitor and track temperatures in compliance with vaccine program requirements and manufacturer recommendations
- Central Storing Opportunities
  - For private vaccine (non-compliant if VFC vaccines)

Best Practices for **Distributing** Flu, COVID-19 & RSV Injectables

- Utilize tracking system for inventory and usage, including receipt, administration, waste, and transfer
- Transfer vaccine timely if short-dated or if usage decreases
- Bar Code Scanning

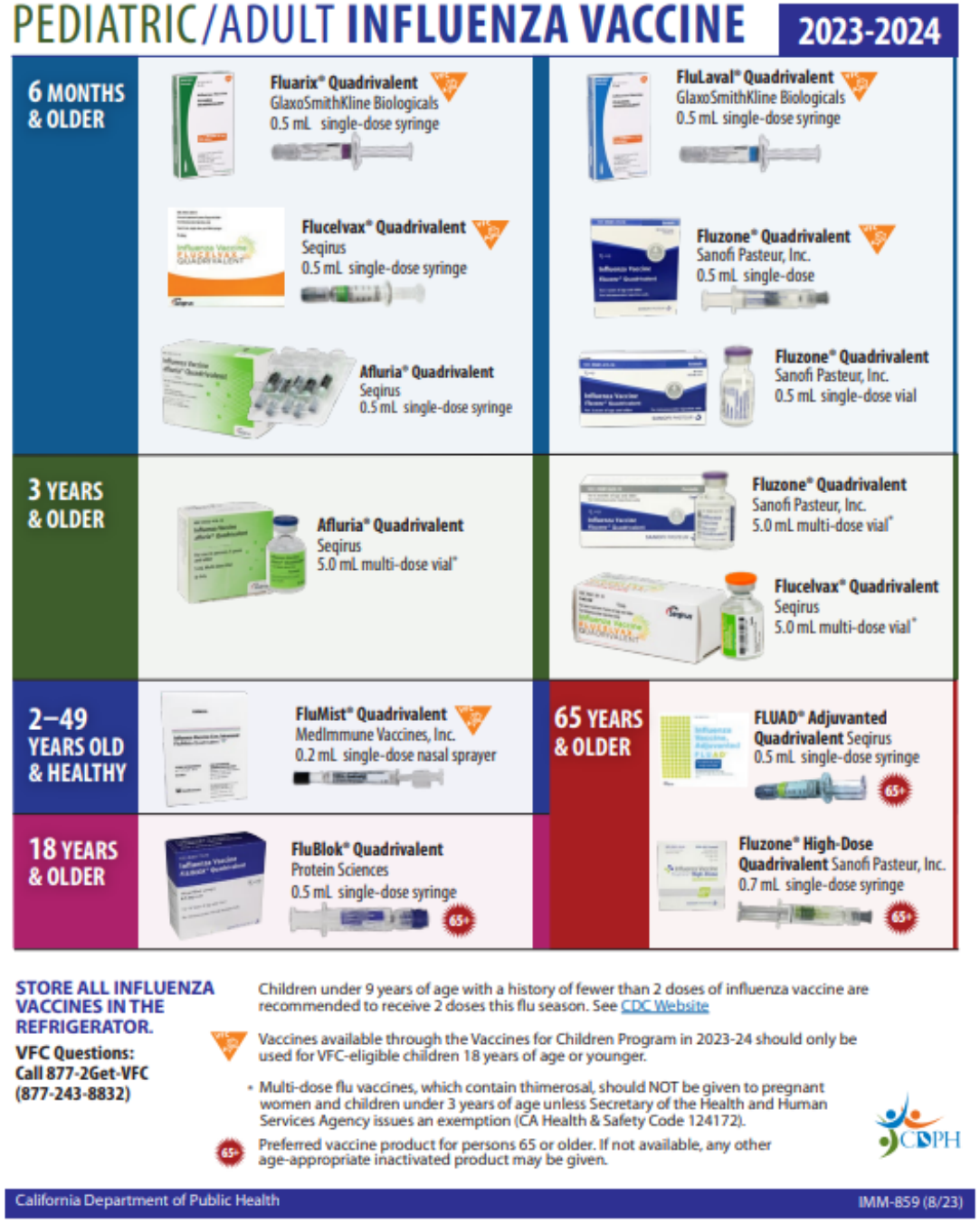
Best Practices for **Administering** Flu, COVID-19 & RSV Injectables

COMMERCIAL/PRIVATE				
AGE	INFLUENZA VACCINE	DOSE	MANUFACTURER	ROUTE
6 months or older	Fluzone PF	0.5 ml	Sanofi Pasteur	Intramuscular
2-49 years old	FluMist[2]	0.2 ml	Medimmune	Nasal
VFC				
AGE	INFLUENZA VACCINE	DOSE	MANUFACTURER	ROUTE
6 months to 18 years old	FluLaval PF	0.5 ml	GlaxoSmithKline	Intramuscular
6 months to 18 years old	Fluarix PF	0.5 ml	GlaxoSmithKline	Intramuscular
6 months to 18 years old	Fluzone PF	0.5 ml	Sanofi Pasteur	Intramuscular
3 years old to 18 years old	Fluzone MDV[1]	0.5 ml	Sanofi Pasteur	Intramuscular
3 years old to 18 years old	FluLaval MDV[1]	0.5 ml	GlaxoSmithKline	Intramuscular
4 years old to 18 years old	Flucelvax	0.5 ml	Seqirus	Intramuscular
2 to 18 years old	FluMist[2]	0.2 ml	AstraZeneca	Nasal

1. Contains preservatives
2. Limited supply

- Start the vaccine conversation at the beginning of the visit...or even prior to the visit with message blasts (via EHR portal, texting or other digital technology)
- Engage the entire health care team-the entire team is responsible for reducing missed opportunities
- More choices → more variability by site with more opportunity for error (try to simplify). See 2019 grid at CPCMG

VFC Influenza Vaccine Options 2023/2024



Strategies for Increasing Immunization Rates

GRASP the opportunity to increase rates

- **G**-grow a pro-immunization culture: all for one and one for all!
- **R**-have specific routines and roles
- **A**-have agreed upon vaccination policies
- **S**-use standing orders
- **P**-use provider prompts

<u>Prompting</u>

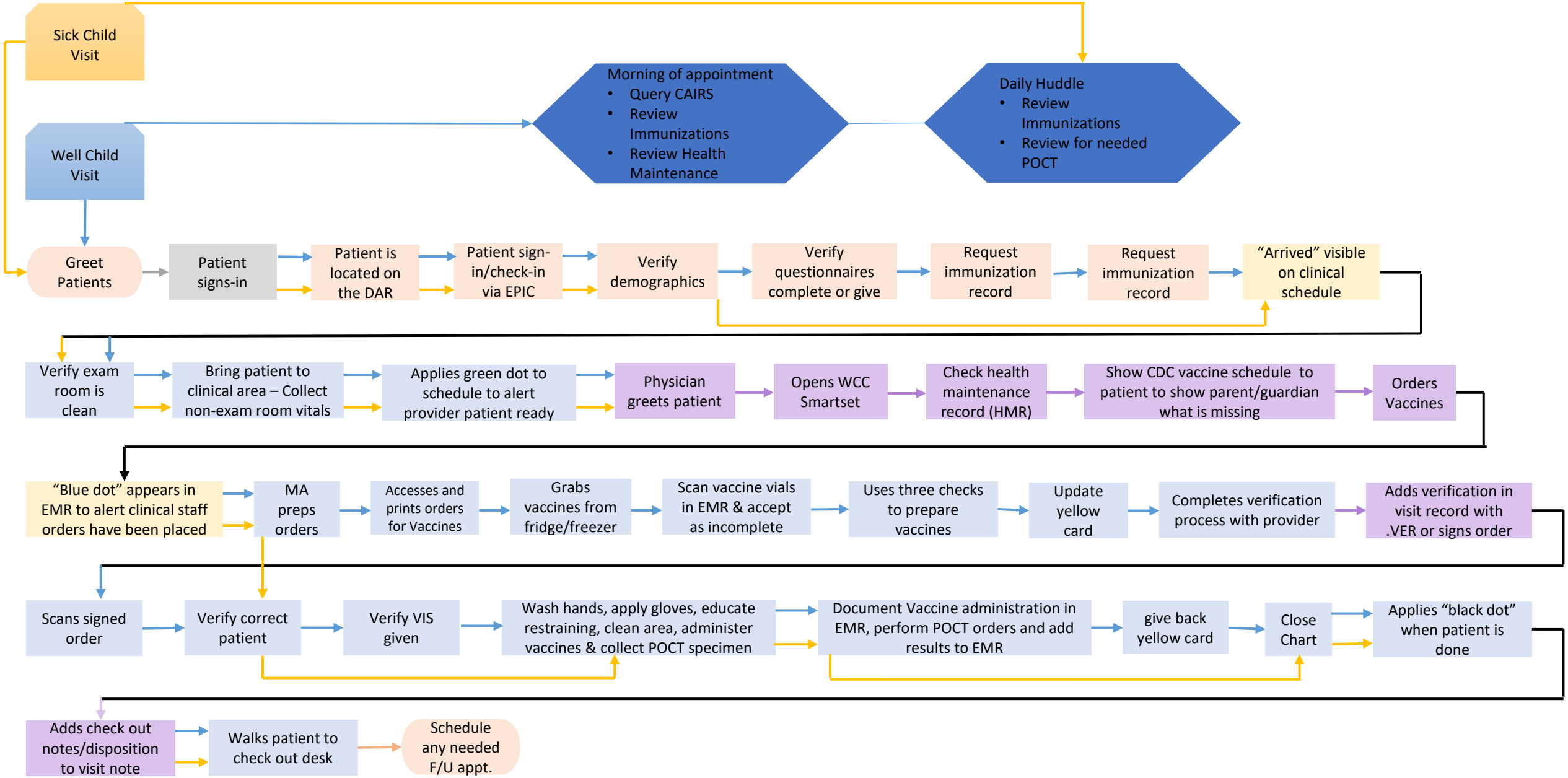
- Activate vaccine prompts/clinical decision support in the EHR
- Leverage the entire team to plant the seed that vaccines might be needed

Strategies for Increasing Immunization Rates

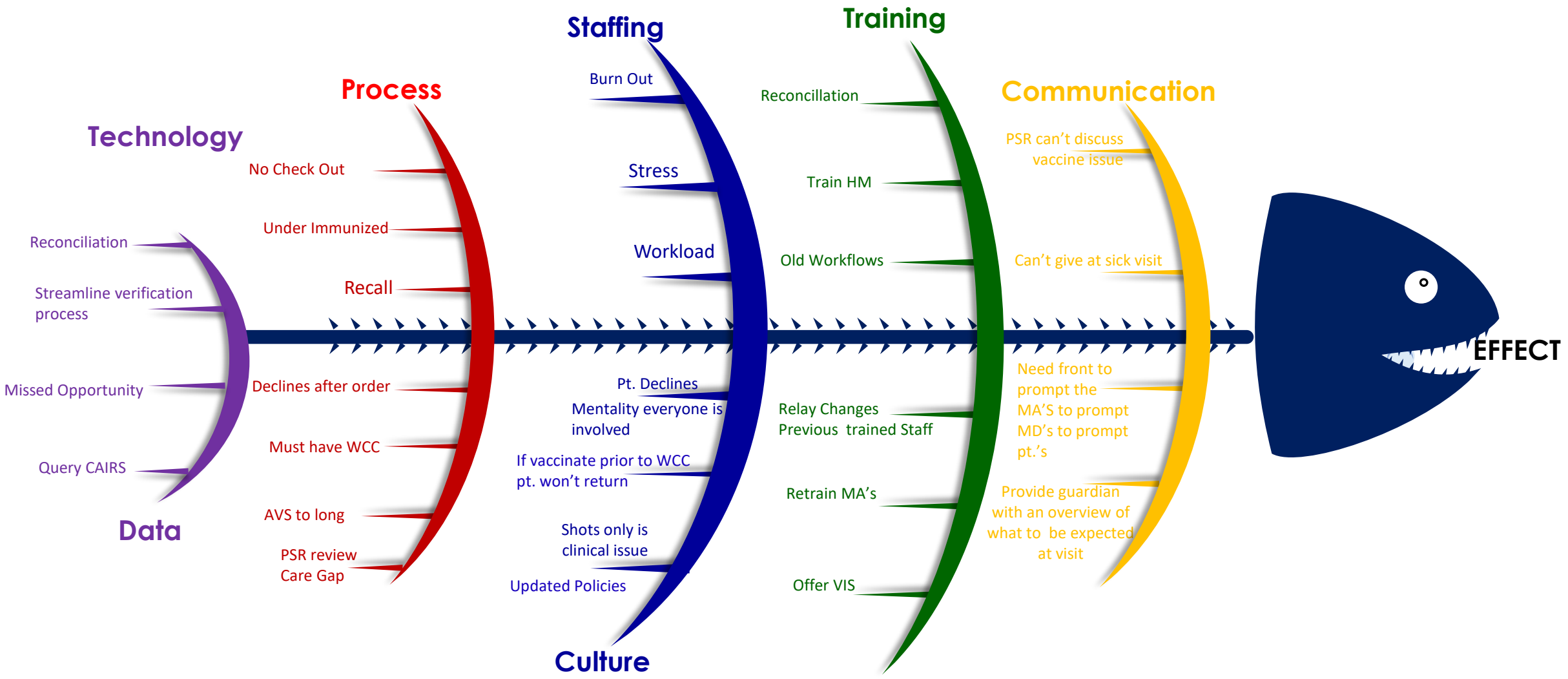
- **Provider/care team**
  - Offer a strong, presumptive recommendation
  - Provide resources and education to patients
  - Don’t focus the bulk of energy on the few that are resistant
  - Utilize motivational interviewing and be considerate of patient views
  - Bundle recommendation for seasonal vaccines with recommendations for other needed vaccines

- **Practice/health system**
  - Market and promote focus on immunizations (website, waiting room, etc.)
  - Avoid missed opportunities by identifying patients who need routine and seasonal vaccinations
  - Consider vaccination at all visit types
  - Simplify scheduling templates, allow for clinical support visits
  - Send vaccine reminder/recall messages
  - Integrate electronic health records (EHR) with or utilize California Immunization Registry
  - Plan vaccination clinics, including satellite, temporary or off-site locations
  - Extend schedule hours for immunizations
  - Partner with outreach providers

Combo 10: Value Stream Mapping @ CPCMG

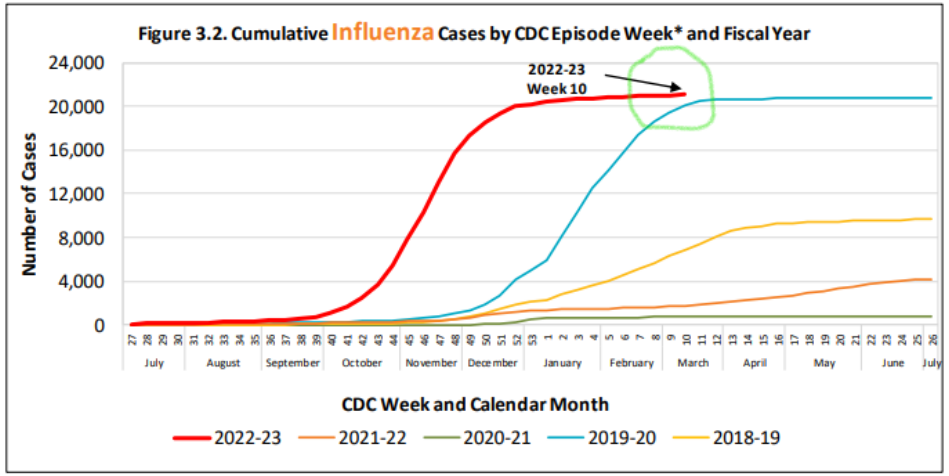


CAUSE AND EFFECT / FISHBONE DIAGRAM



Trouble with the Curve Ball
What Happens When Disease Spikes Early?

- Challenges just seeing patients let alone considering vaccinations
- “Late” start & early finish
  - Emphasizes need to plan early
  - Importance of course correcting/pivoting



*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported. Data for the most recent week may be incomplete.

Key Takeaways

- Focus limited resources on the most vulnerable and those with the least access
- Leverage standing orders to improve efficiency
- Engage the entire health care team to assist with the vaccination process
- Vaccinate at all visits (not just well visits or at special clinics) to reduce missed opportunities
- Review your system of care and remove unnecessary steps/ redundancies that might be creating vaccination barriers

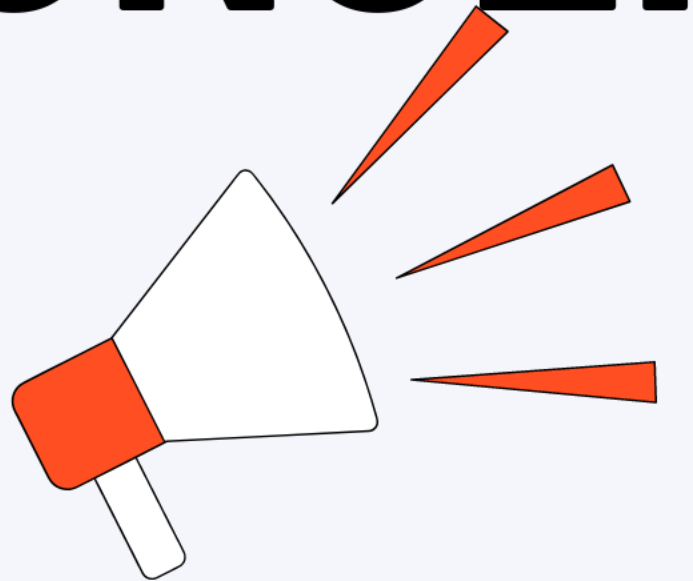
Questions?

Children's Primary Care Medical Group, Inc.

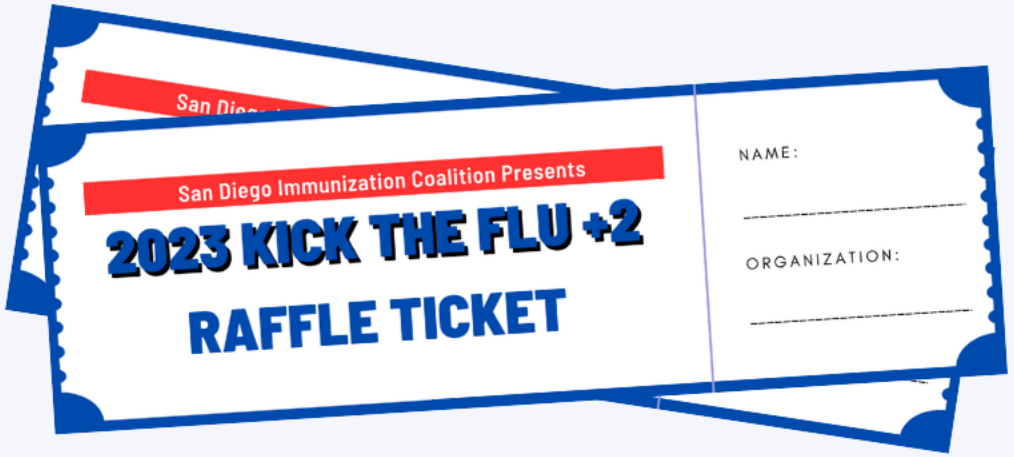
Rady Children's Physician Management Services

THANK YOU

ANNOUNCEMENTS



RAFFLE TIME!


San Diego Immunization Coalition Presents
2023 KICK THE FLU +2
RAFFLE TICKET
NAME:
ORGANIZATION:


SDIC


SDIC

Events

September	October	November
14- Catch Up Our Kids: Best Practices to Increase Immunizations in Schools	**6**- General Meeting **TBD**- Long-Term Care Webinar	**9**- Immunization Skills Institute

Evaluation

Reminder

THANK YOU!