

# FUTURE OF PEDIATRICS



Pediatric Health Network



# A few notes about today's Webinar

- All lines are muted throughout the webinar.
- Please use the Q&A box to ask questions or make comments.
- Today's Webinar recording, slides and resources will be posted to the PHN website following the presentation.
- You can find past FOP presentations on our website at <https://pediatrichealthnetwork.org/future-of-pediatrics/>

# Upcoming FOP Talks!

DATE/TIME	TOPIC	SPEAKER(S)
July 13 12:00-12:30	Atopic Dermatitis: New Treatment Recommendations	Kaiane Habeshian, MD
July 13 12:00-12:30	Hemangiomas & Port Wine Stain	A. Yasmine Kirkorian, MD
July 27 12:00-12:30	Navigating a World with Asthma Parent Advisory Panel	Candice Dawes, MD & Parent Panel
July 27 12:00-12:30	Less is More: Optimal Duration of Antibiotic Therapy in Ambulatory Pediatrics	Ariella Slovin, MD; David Sullivan, MD; Rana Hamdy, MD, MPH, MSCE

# Speakers



**Kurt Newman, MD**



**Bud Wiedermann, MD, MA**

## **Conflict of Interest:**

- Receiving funding from Pfizer, Inc, for a pediatric COVID-19 vaccine trial

# Speakers



**Kofi Essel, MD, MPH**

## **Conflict of Interest:**

- No financial or business interest, arrangement or affiliation that could be perceived as a real or apparent conflict of interest in the subject (content) of their presentation.
- No unapproved or investigational use of any drugs, commercial products or devices.

# CEO Update



**Kurt Newman, M.D.**

Twitter: @ChildrensNatCEO

# Congratulations to our Pediatric Health Network!

- Reimagining our Future of Pediatrics CME as virtual event (next year in person!)
- Co-hosting COVID Community Town Halls with CNH & AAP chapters
- Implementing our first PHN value-based contracts- and practice payments
- Leading regional Quality Improvement (Mental Health & Asthma)
- Partnering with CNH to improve collaborative care with our CNH specialists

## Pediatric Health Network





## TOP 7 CHILDREN'S HOSPITAL IN THE NATION

SPECIALTY	2021-2022	
<b>Overall Hospital Ranking</b>	<b>7</b>	
Cancer	5	↑
Cardiology and Heart Surgery	38	
Diabetes and Endocrinology	10	
Gastroenterology and GI Surgery	20	↑
Neonatology	<b>1</b>	
Nephrology	6	↑
Neurology and Neurosurgery	3	
Orthopedics	6	↑
Pulmonology	8	↑
Urology	25	



# Children's National Assumes Leadership Role During COVID-19 Pandemic

**Dr. Biden and Dr.  
Fauci Visit  
Children's  
National on  
May 20, 2021**



**Dr. Fauci told reporters, "It is really a pleasure for Dr. Biden and I to be here. This is a phenomenal institution, you know one of the best pediatric hospitals in the world, really, not only in the United States."**



# Children's National Prince George's County

- Families in Prince George's County Maryland have greater access to the broad range of world-class pediatric specialty medical and surgical care Children's National offers including:
  - cardiology,
  - neurology,
  - hematology,
  - allergy, and
  - sports medicine and orthopedics.
- Additionally, families will have easier access to care for infusions, transfusions, MRIs, and outpatient surgery.





# Children's National Takoma Theatre: New Home for Psych & Behavioral Health Programs



- Neuropsychology
- Pediatric Development Program
- Psychiatry
- Psychology and Behavioral Health
- Scottish Rite Center for Childhood Language Disorders

# Now Open: Fight for Children Sports Medicine Center in Silver Spring, Maryland



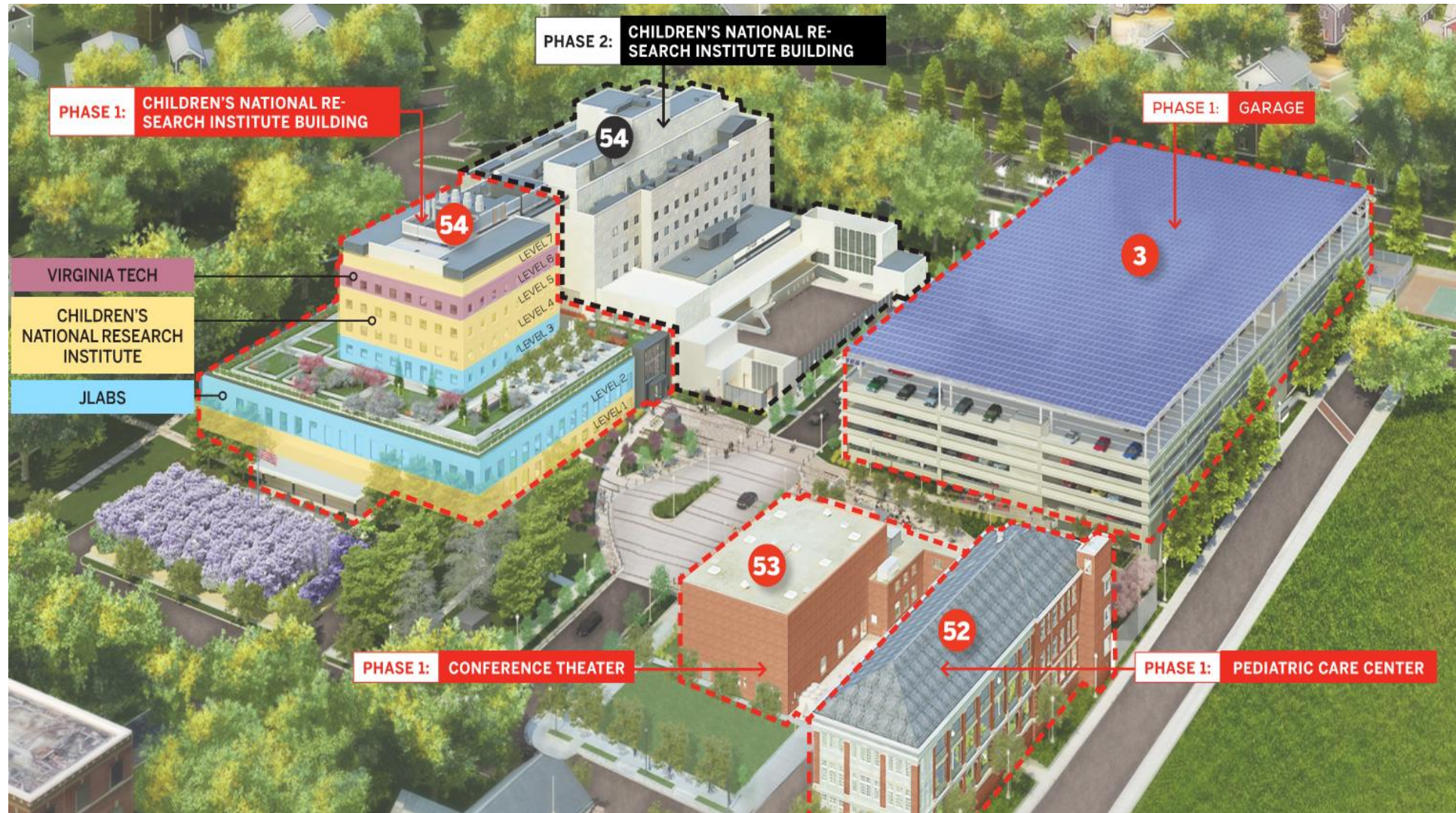
- Service offerings at the Fight For Children Sports Medicine Center will expand throughout the year.

Full services will include:

- pediatric and adolescent physical therapy and rehabilitation in a state-of-the-art gym
- sports performance and injury prevention programs
- sports specific motion analysis for performance improvement
- traditional 3D gait analysis.



# Opened: The Nation's First Pediatric Research & Innovation Campus





# Happy Birthday Children's National: 150 years young!



Thank you!

# COVID-19 Update for Pediatric Healthcare Providers



**Bud Wiedermann, MD, MA**

Attending in Infectious Diseases, Children's National Hospital

Professor of Pediatrics, The George Washington University School of Medicine and Health Sciences



# Conflict of Interest Statement

Dr. Wiedermann receives funding from Pfizer, Inc. for

A Phase 1, Open-Label Dose-Finding Study to Evaluate Safety, Tolerability, and Immunogenicity and Phase 2/3 Placebo-Controlled, Observer-Blinded Safety, Tolerability, and Immunogenicity Study of a SARS-COV-2 RNA Vaccine Candidate Against COVID-19 in Healthy Children <12 Years of Age

# Learning Objectives

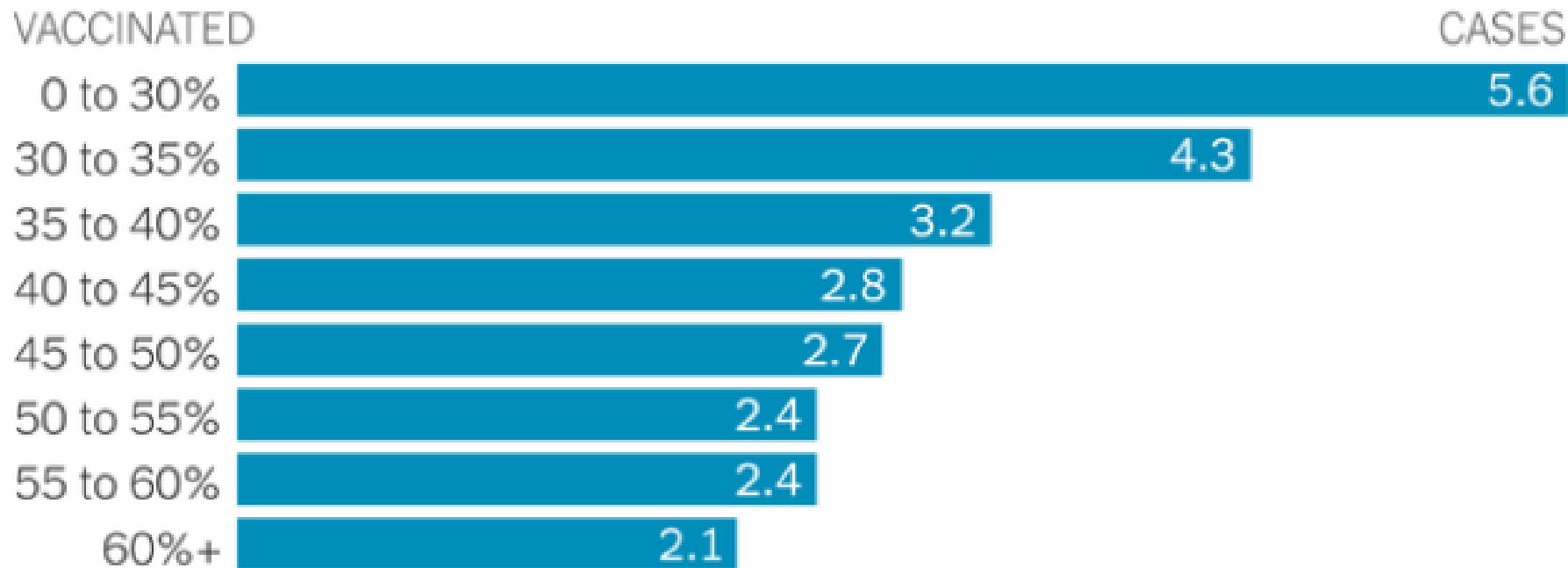
After completing this session, learners will be able to

1. Compare epidemiology and nature of links of myocarditis to both COVID-19 vaccination and natural COVID-19 disease
2. List features influencing authorization/approval of COVID-19 vaccines for younger children
3. Assess criteria for children returning to in-person schooling and competitive sports

# The New COVID Epidemiology: Pockets of Disease

## New Covid Cases, by a County's Vaccination Rate

Daily average per 100,000 residents, over the week ending June 22



- Driven By:**
- Unvaccinated clusters
  - Delta variant

Counties with unavailable vaccination data are excluded from the chart.

By The New York Times | Sources: State, county and regional health departments

# Cardiac Injury and COVID-19 Vaccines: The Big Picture

- All currently authorized COVID-19 vaccines are highly effective
- We only know about the association between vaccines and myocarditis/pericarditis because we have a highly effective tracking system
  - VAERS
  - V-safe
  - Many more
- As of last week, the association is very likely true
- Need to carefully consider benefits vs risks in deciding whether to recommend COVID-19 vaccines

# Most commonly reported adverse events to VAERS after Pfizer-BioNTech COVID-19 vaccination\* (data thru Jun 11, 2021)

**12–15 years old\* (N= 2,540)**

<b>Adverse event<sup>‡</sup></b>	<b>n (%)</b>
Dizziness	618 (24.3)
Syncope	446 (17.6)
Nausea	308 (12.1)
Headache	281 (11.1)
Vomiting	221 (8.7)
Pallor	218 (8.6)
Loss of consciousness	217 (8.5)
Pyrexia (fever)	215 (8.5)
Hyperhidrosis	211 (8.3)
Fatigue	182 (7.2)

**16–25 years old<sup>†</sup> (N= 12,759)**  
(for comparison)

<b>Adverse event<sup>‡</sup></b>	<b>n (%)</b>
Dizziness	2,832 (22.2)
Headache	2,197 (17.2)
Nausea	1,955 (15.3)
Pyrexia (fever)	1,948 (15.3)
Fatigue	1,689 (13.2)
Chills	1,609 (12.6)
Pain	1,560 (12.2)
Syncope	1,257 (9.9)
Hyperhidrosis	946 (7.4)
Vomiting	918 (7.2)

- 12–15 years old: ~6.0 million doses administered (May 10 thru Jun 11, 2021)
- 16–25 years old: ~21.6 million doses administered (December 14, 2020, thru Jun 11, 2021)

# CDC Acute Myocarditis Case Definition

## Probable Case

Presence of  $\geq 1$  new or worsening

Chest pain/pressure/discomfort

Dyspnea/SOB/pain with breathing

Palpitations

Syncope

OR for  $<12$  yo  $\geq 2$  of irritability, vomiting, poor feeding, tachypnea, lethargy

AND troponin/ECG/echo/MRI suggestive

AND no other identifiable cause

## Confirmed Case

Ditto

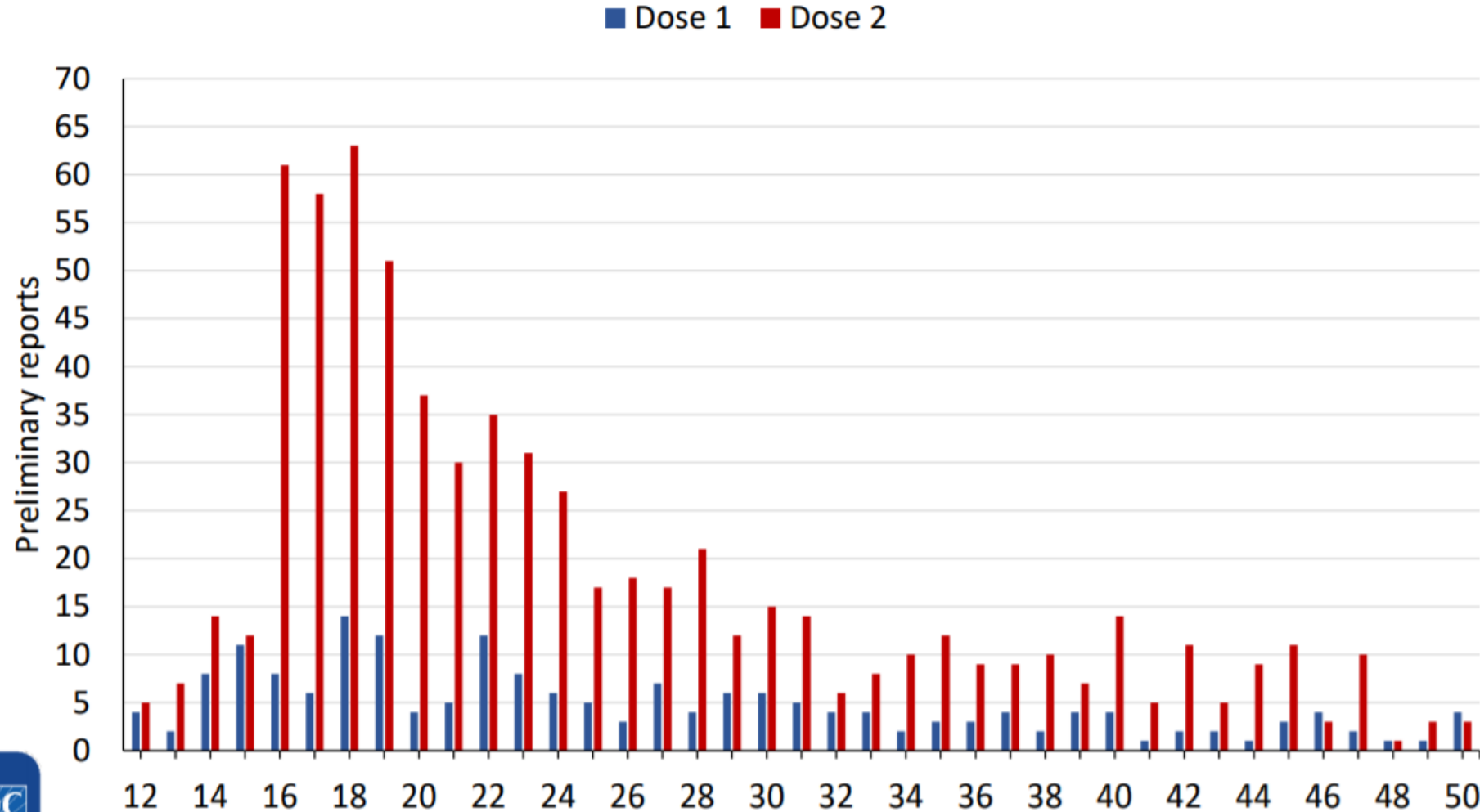
Ditto

Histopathologic confirmation OR elevated troponin AND positive MRI

Ditto

# Preliminary reports of myocarditis/pericarditis to VAERS after mRNA COVID-19 vaccination by age and dose number\*

(as of Jun 11, 2021)

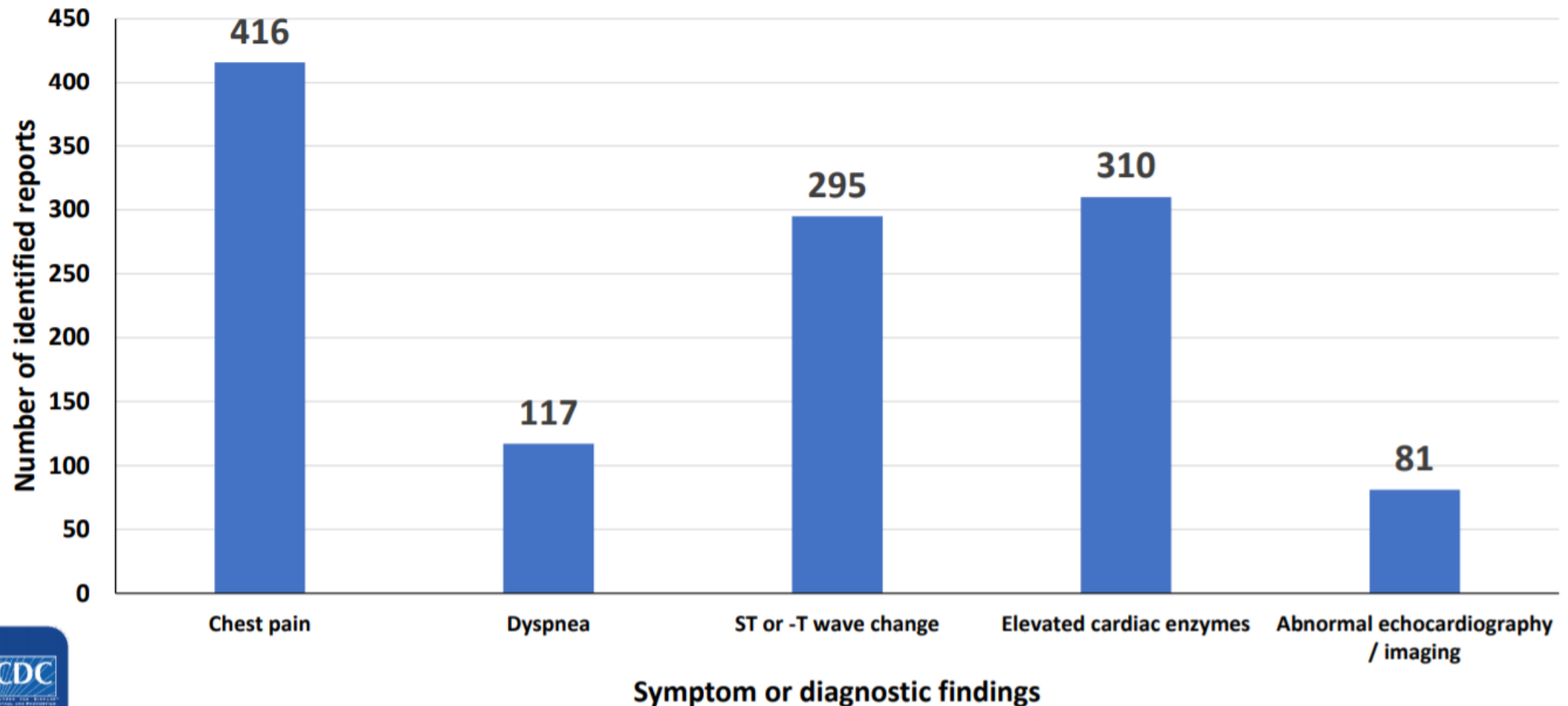


\* Age truncated at >50yr:  
Reports of persons >50yr  
of age include 70 after  
Dose 1, 119 after Dose 2



# Symptoms and diagnostic findings of preliminary myocarditis/pericarditis reports after mRNA COVID-19 vaccination under review, limited to $\leq 29$ years old (N=484)

(data thru Jun 11, 2021)





# Myocarditis/pericarditis chart confirmed rates in VSD in 21-day risk interval, 12–39-year-olds

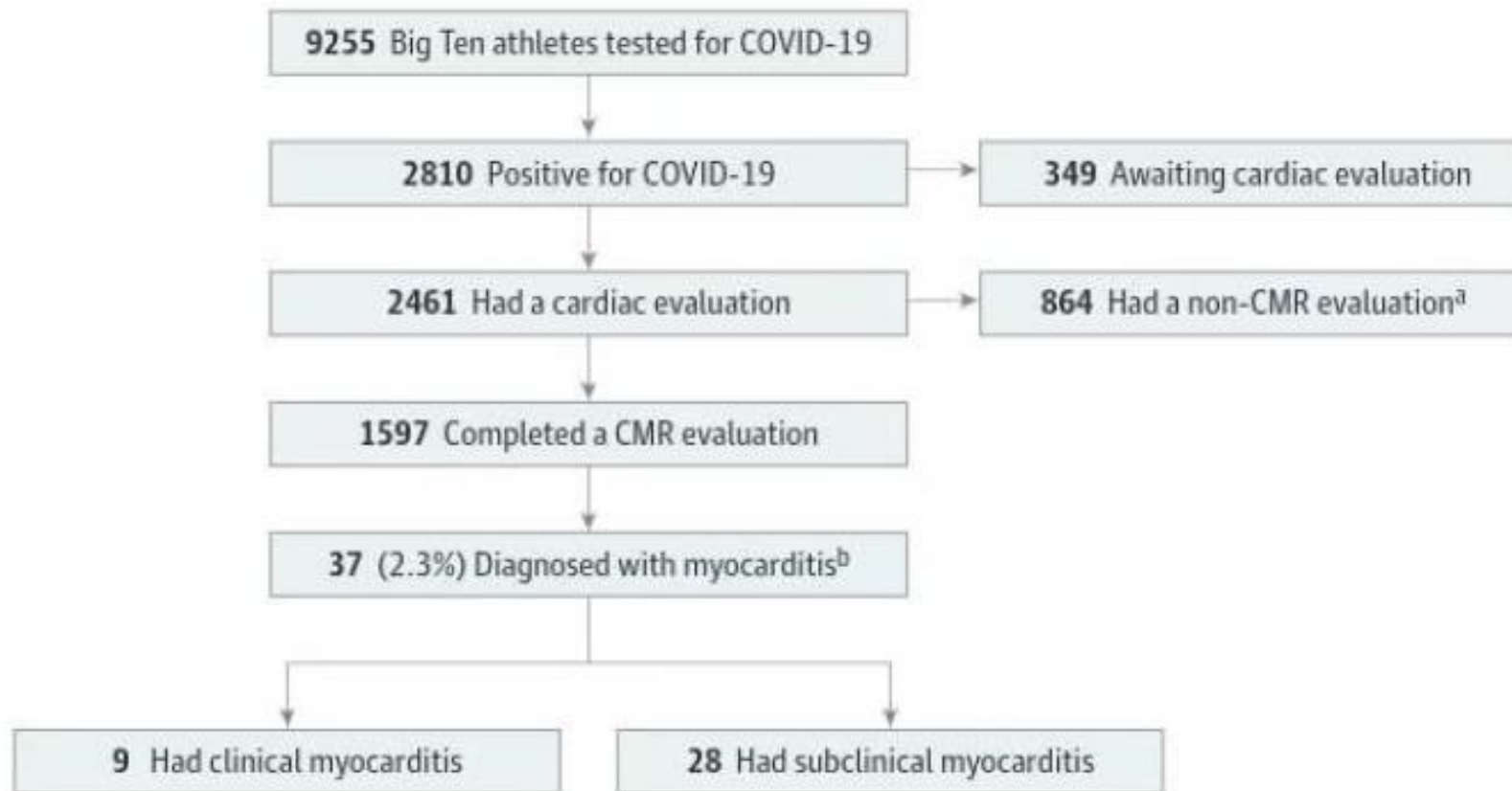
(thru Jun 5, 2021)

Vaccine(s) (dose #)	Cases	Doses admin	Rate per million doses (95% CI)
mRNA (both doses)	26	3,418,443	8 (5.3–11.8)
mRNA (dose 1)	8	1,879,585	4.4 (1.9–8.8)
mRNA (dose 2)	18	1,538,858	12.6 (7.5–19.9)
Pfizer-BioNTech (dose 1)	3	1,211,080	2.6 (0.5–7.7)
Pfizer-BioNTech (dose 2)	7	958,721	8.0 (3.2–16.5)
Moderna (dose 1)	5	668,505	7.5 (2.4–17.6)
Moderna (dose 2)	11	580,137	19.8 (9.9–35.5)



# Comparing Apples and Oranges

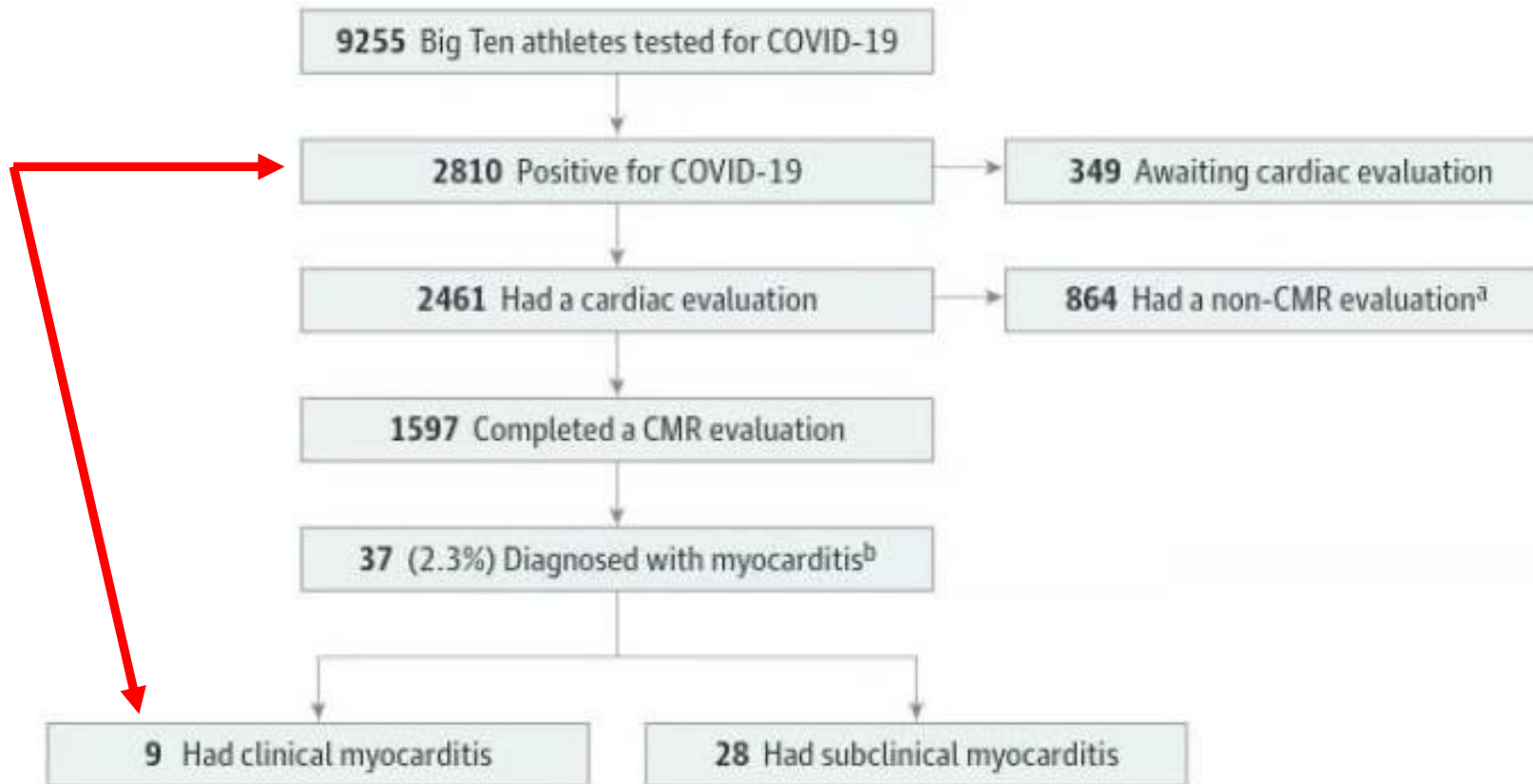
Figure 1. Cohort of Big Ten Athletes



# Comparing Apples and Oranges

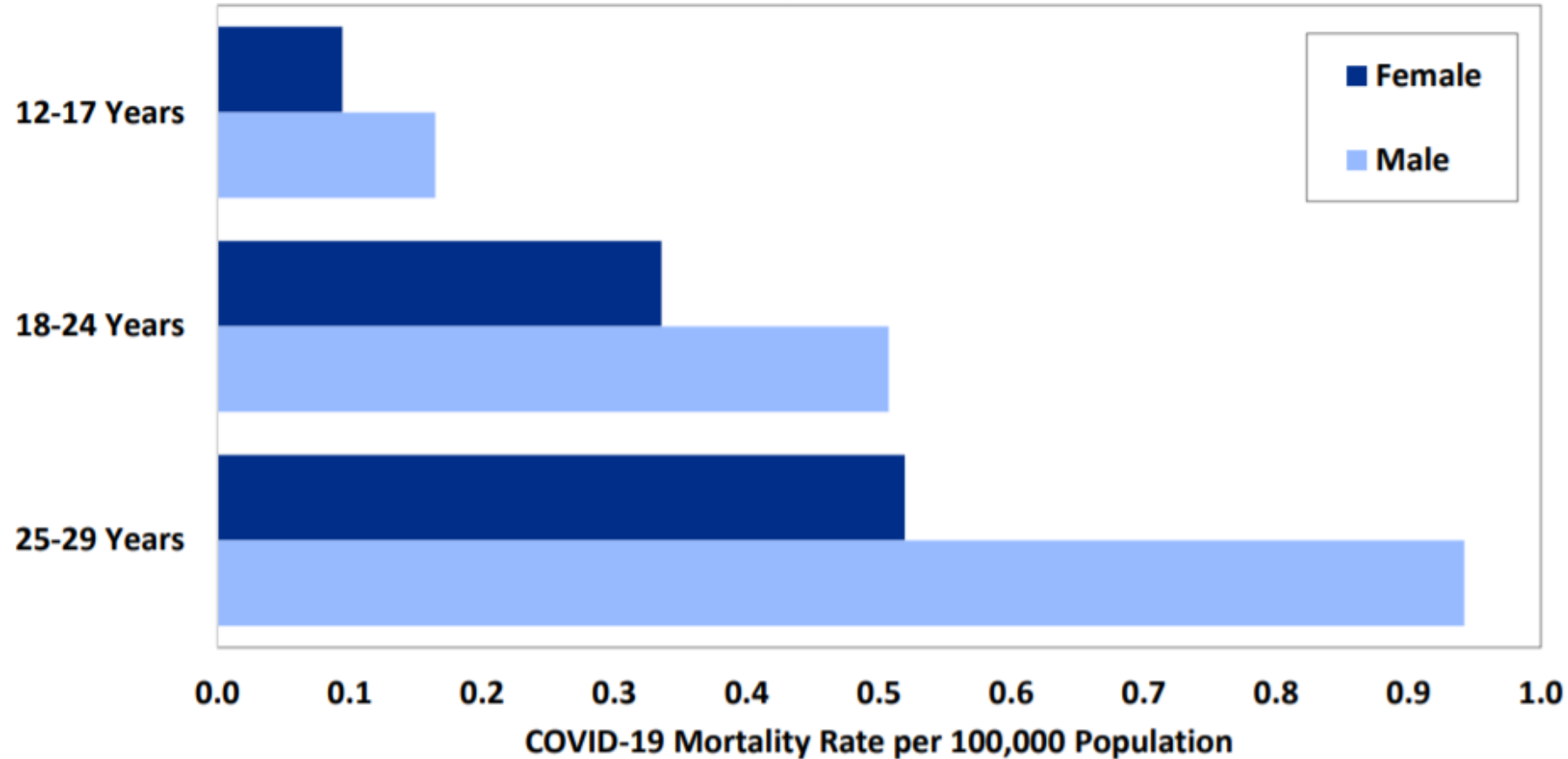
Figure 1. Cohort of Big Ten Athletes

9/2810 = 3203  
symptomatic  
myocarditis cases  
per million SARS-  
CoV-2 infections



# COVID-19-associated deaths continue to occur in adolescents and young adults

COVID-19 Mortality Rate per 100,000 Population, by Age Group and Sex  
April 1, 2021 – June 11, 2021



Since beginning of pandemic,  
**2,767** COVID-19 deaths  
have been reported  
among persons  
aged 12-29 years;  
**316** deaths reported  
since April 1, 2021

<https://covid.cdc.gov/covid-data-tracker/#demographics>



# Predicted cases prevented vs. myocarditis cases for every million second dose vaccinations over 120 days

## Females 12–17 Years



**8,500** COVID-19 cases prevented



**183** hospitalizations prevented



**38** ICU admissions prevented

**1** death prevented

**8–10** myocarditis cases



## Males 12–17 Years



**5,700** COVID-19 cases prevented



**215** hospitalizations prevented



**71** ICU admissions prevented

**2** deaths prevented

**56–69** myocarditis cases



Hospitalizations, ICU admissions and deaths based on data for week of May 22, 2021.

32

**Bottom Line: Keep Vaccinating!**  
**(...and be able to answer questions from patients and families)**

# What's Different About Testing COVID-19 Vaccines in Younger Children?

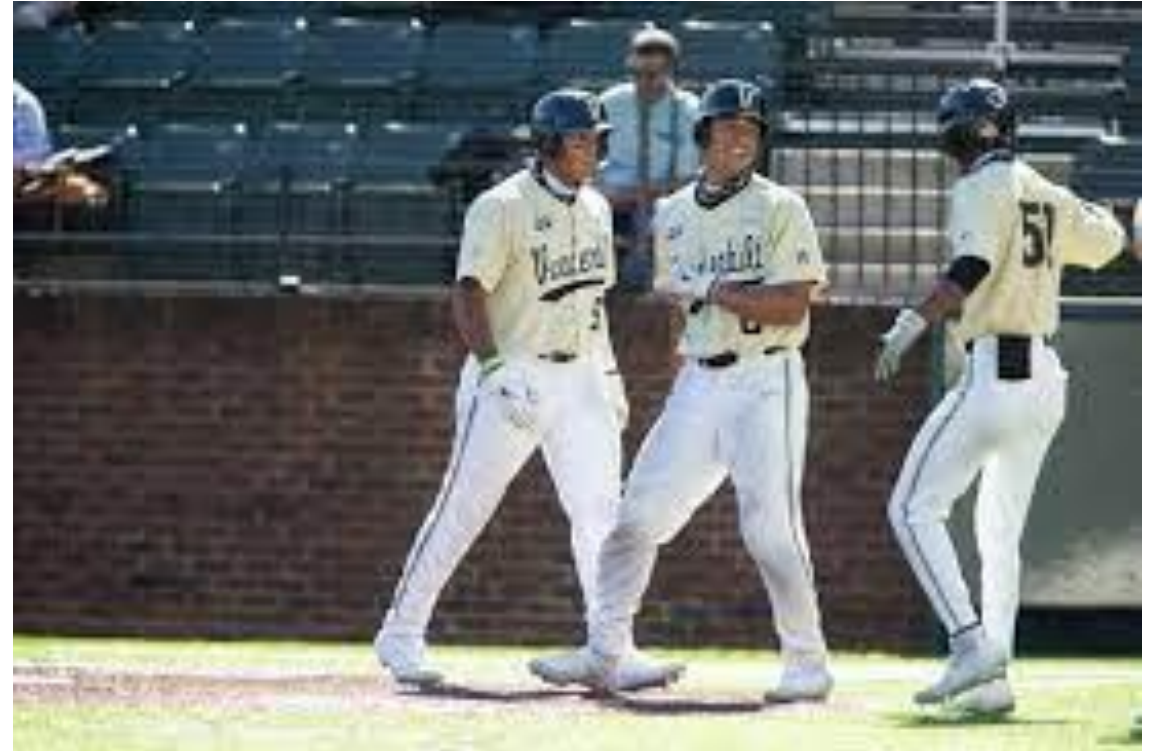
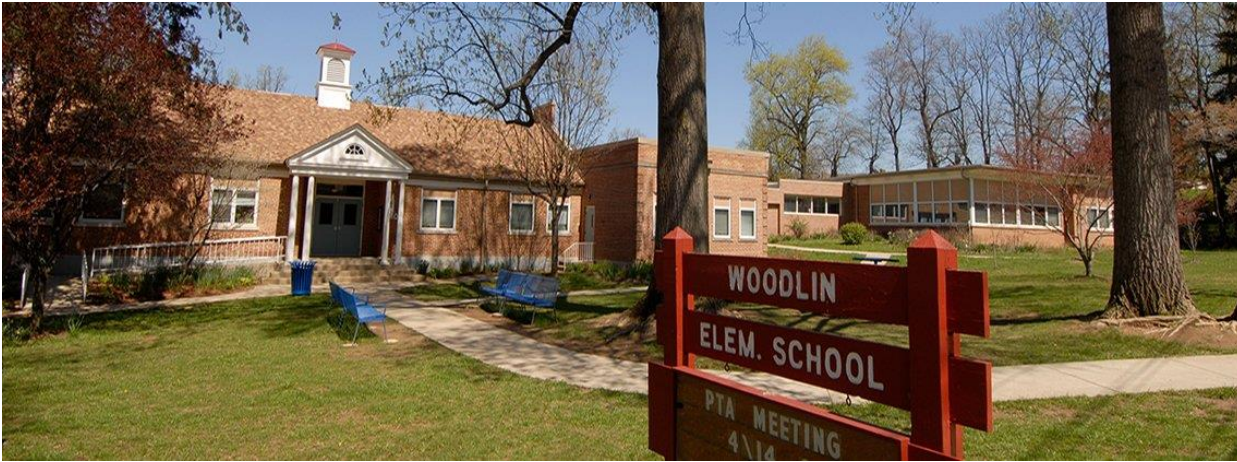
- Unlike the adolescent/adult trials, not designed (powered) to determine true efficacy – likely too few children to see significant differences in infection rates between placebo and vaccine
  - Instead will be “immunobridging” trial as means to assess likely efficacy
  - A bit difficult since we don't absolutely know an immunity cutoff for protection
    - Looking at neutralizing antibody, B cell memory, T cell responses (none of which are available with commercial antibody testing)
- Safety paramount
  - Local reactions, systemic reactions (fever, fatigue, headache, chills, vomiting, etc), AEs, SAEs

# Timeline for Authorization for Young Children

- Place your bets (I'm not betting)
- Some press releases have hinted about EUA submission is early as September
- Some concern expressed at last week's ACIP meeting not to push EUA for children under 5 yo



# Are You Sick of Hearing About the “New Normal?”



# Everyone Agrees In-Person Learning is Desired

- Evidence suggests that many K-12 schools that have strictly implemented prevention strategies have been able to safely open for in-person instruction and remain open.
- CDC's K-12 operational strategy presents a pathway for schools to provide in-person instruction safely through consistent use of prevention strategies, including universal and correct use of masks and physical distancing.
- All schools should implement and layer prevention strategies and should prioritize universal and correct use of masks and physical distancing.
- Testing to identify individuals with SARS-CoV-2 infection and vaccination for teachers and staff provide additional layers of COVID-19 protection in schools.

# High-Risk Focus: PCPs and Specialty Partnership

## Vaccinate the Household!

### DC AAP High Risk Student List

- Chronic lung disease, asthma (moderate or severe)
- Diabetes
- Genetic, neurologic, or metabolic conditions
- Heart disease since birth
- Immunosuppression
- Medical complexity
- Obesity
- Sickle cell disease

# Return to Sports After COVID-19: AAP Summary

- Asymptomatic/mildly symptomatic infection
  - Initial phone or telehealth visit OK
  - Ask about chest pain, SOB. Palpitations, syncope
- Moderately symptomatic infection (but no MIS-C)
  - No exercise until cleared by provider after resolution and end of quarantine
  - AHA 14-element screening
  - PE and ECG
  - If all OK, gradual return to physical activity
- Severe infection or MIS-C
  - No exercise 3-6 months
  - Obtain cardiology clearance





# Thank you!

The recording, presentation and materials will be posted on our website within 1 week.

Questions? Contact us at [phn@childrensnational.org](mailto:phn@childrensnational.org)