

# School Re-Opening

ICAAP Education Seminar

June 16, 2021

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David Soglin, MD



Illinois Chapter

INCORPORATED IN ILLINOIS

American Academy of Pediatrics

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THE UNIVERSITY OF  
CHICAGO

Department  
of Pediatrics  
Established 1930



# Educational Objectives

- Approach to working with schools/school boards/teachers on COVID-19
- Describe the state of the pandemic in relationship to schools
- Share school reopening guidelines
- Neither Drs. Soglin nor Johnson have any financial disclosures or other conflicts to report except their ongoing (and hopefully soon to resume) conflict on the racquetball court

# Credentials

- Daniel Johnson, MD, FAAP

- Treasurer and Board Member, ICAAP
- Vice Chair for Clinical Services, Dept. of Peds., University of Chicago Medicine (UCM)
- Section Chief, PID, Dept. of Peds., UCM
- Section Chief, Academic Peds., Dept. of Peds., UCM
- Founder and Director, ECHO-Chicago
- Member, ICAAP
  - School Re-Opening Task Force
- Member, IDPH
  - School Re-opening Working Group
- Member, Chicago Med. Soc., COVID-19 Task Force
- Appointee, CDPH, COVID Vaccine Scientific Work Group

- David Soglin, MD, FAAP

- Chief Medical Officer
  - La Rabida Children's Hospital
- Member, ICAAP
  - School Re-Opening Task Force
- Member, IDPH
  - School Re-opening Working Group
- Founding Member
  - Partnership for Resilience
- Medical Advisory Group
  - District #65 – Evanston
  - District #202 - Evanston

# Engaging with school systems

- 852 School Districts in Illinois
  - City of Chicago School District #299
    - 638 schools
    - ≈350,000 students
  - Ohio Community High School District #505
    - 1 school
    - 33 students



# Engaging with School Systems

- Each with authority for their school(s)
- Different pressure points and politics
- Various degrees of trust between unions and administration
- Different community spread rates and vaccine uptake
  
- Learn about and acknowledge their specific challenges

# Engaging with School Systems

- School Boards
- Superintendents, Principals, Administration
- Faculty and staff
  - Teachers
  - Support staff
  - Custodial
- Parents and Students
- Community



# “Reopen Evanston Schools”

- Group of Evanston parents and physicians actively lobbying the schools to re-open.
- Accurate on science.
- Called for “safe and equitable” reopening of Evanston schools

BUT

the school districts felt harassed and refused to meet with them.

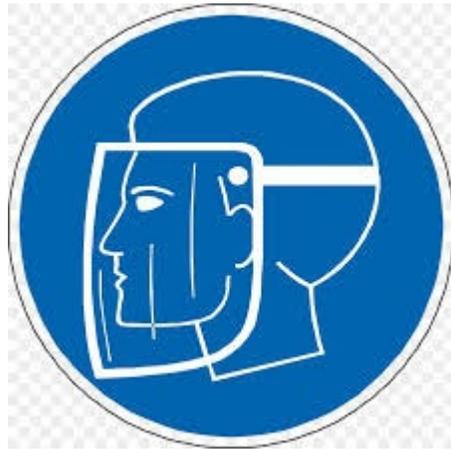
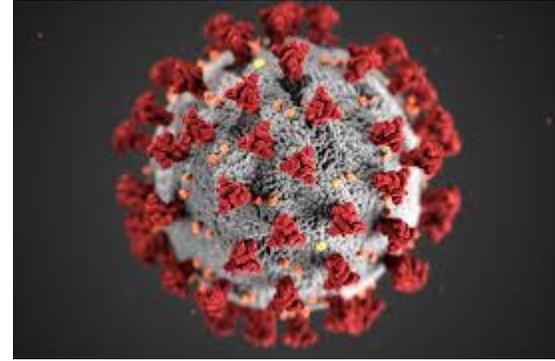
# What works

- Assume good will
- Meet them where they are
- Be curious
- Encourage confidence building
- Encourage wide engagement
- Find out what they need



# What works

- Provide your expertise
- Stick to the science
- Advise don't advocate
- Decisions and consequences are theirs



“Fight for the things that you care about. But do it in a way that will lead others to join you.”

Ruth Bader Ginsburg



# COVID-19: Taking Us to New Frontiers of Science



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We've gone where no one  
had gone before.....





Schools in the Fall? We need a

COVID-19  
Recovery  
Blueprint



# First Consideration

- History of COVID-19 in schools
  - The data is reassuring of little to no spread

Centers for Disease Control and Prevention  
**MMWR**

Morbidity and Mortality Weekly Report  
March 19, 2021

Early Release / Vol. 70

## Low SARS-CoV-2 Transmission in Elementary Schools — Salt Lake County, Utah, December 3, 2020–January 31, 2021

- In a high community transmission setting, low school-associated transmission was observed with a 0.7% secondary attack rate
- Mask adherence was high, but students' classroom seats were <6 ft apart and a median of 3 ft apart.

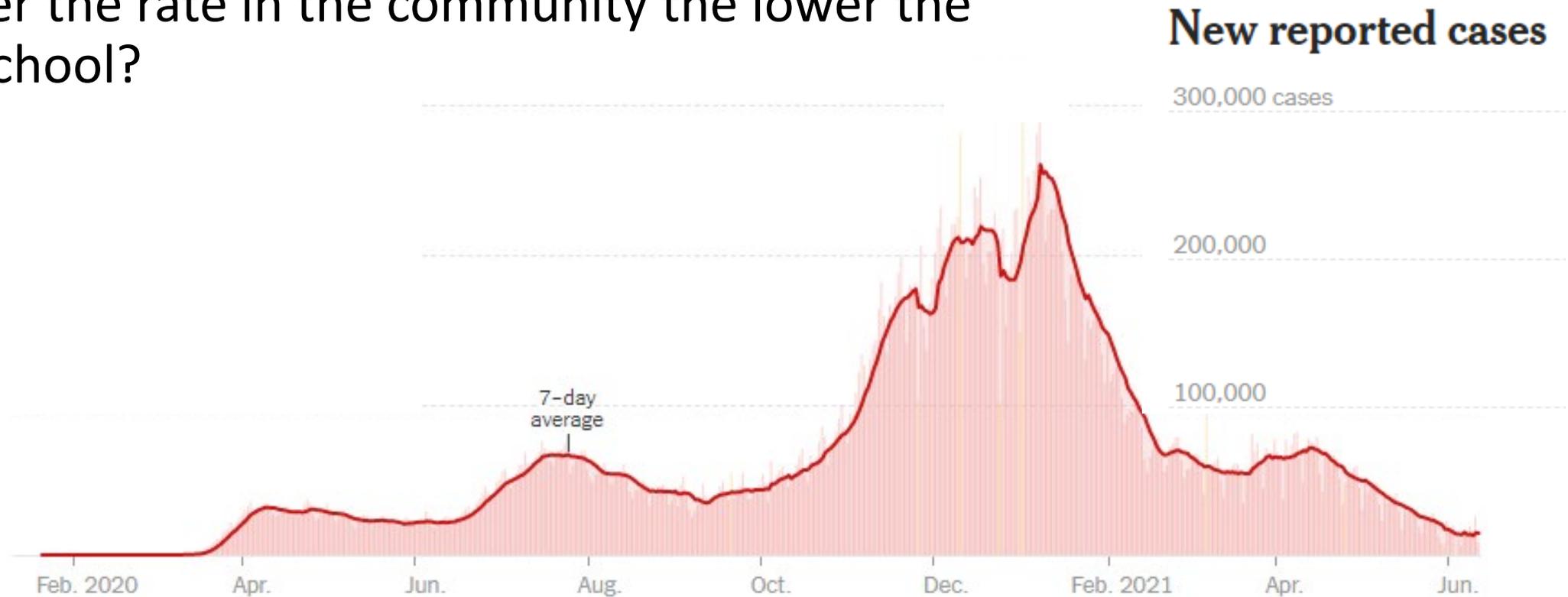


## COVID-19 Cases and Transmission in 17 K-12 Schools — Wood County, Wisconsin, August 31–November 29, 2020

Weekly / January 29, 2021 / 70(4);136-140

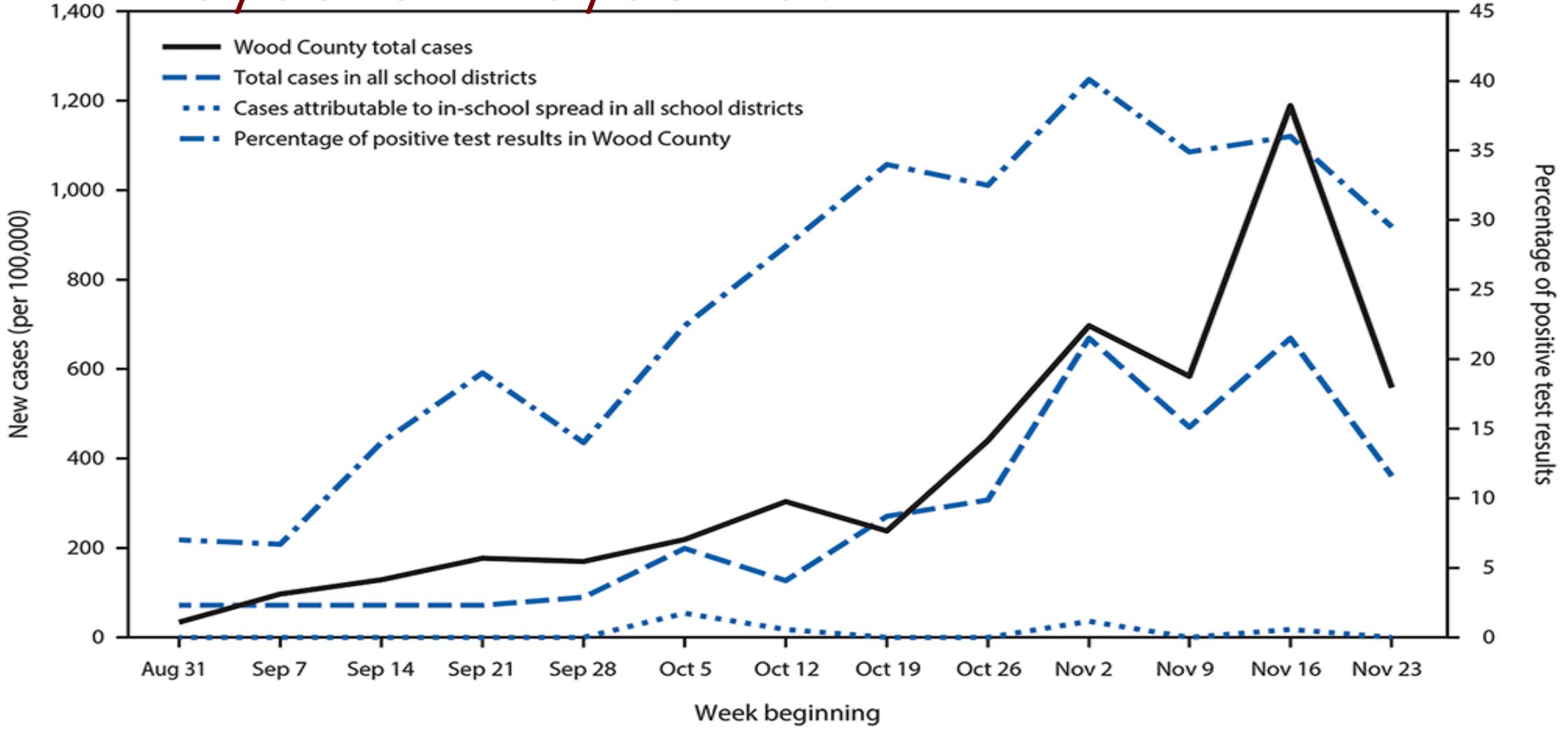
# Second Consideration

- Reduced cases in the community
- The lower the rate in the community the lower the rate at school?



# Maybe or Maybe Not

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7004e3.htm>



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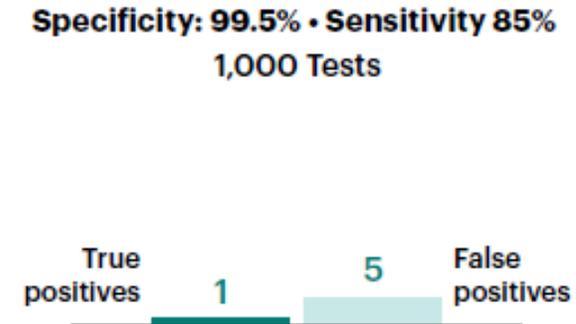
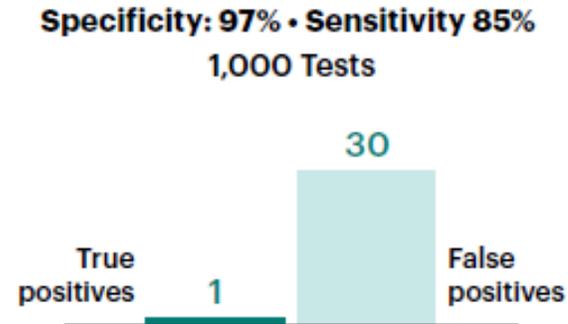
# Second Consideration

- Reduced cases in the community
- The lower the rate in the community the lower the rate at school?
  - Not exactly but makes sense to consider that the less activity in the community means:
    - Screening not useful

# How Active Infection Rate and Test Specificity Affect True/False Positive Results

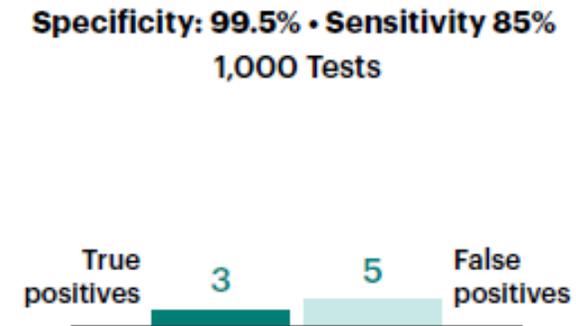
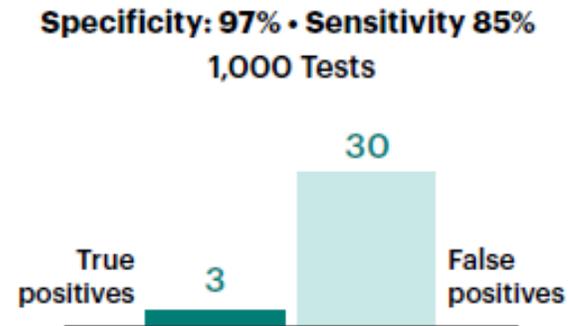
**Moderate Risk**  
(20 cases/100,000 people in last 14 days)

**Estimated Active Infection Rate\* 0.14%**



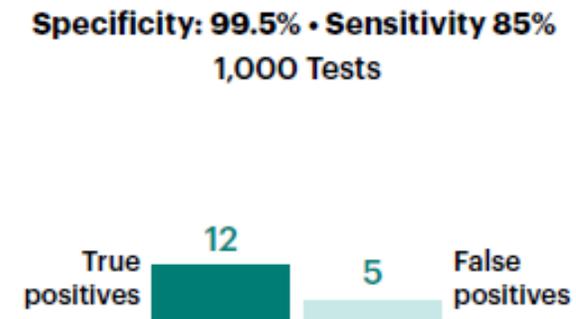
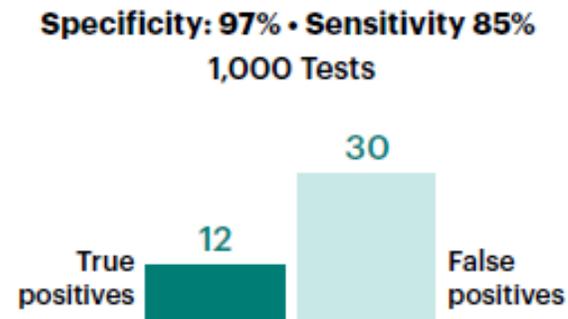
**Higher Risk**  
(50 cases/100,000 people in last 14 days)

**Estimated Active Infection Rate\* 0.36%**

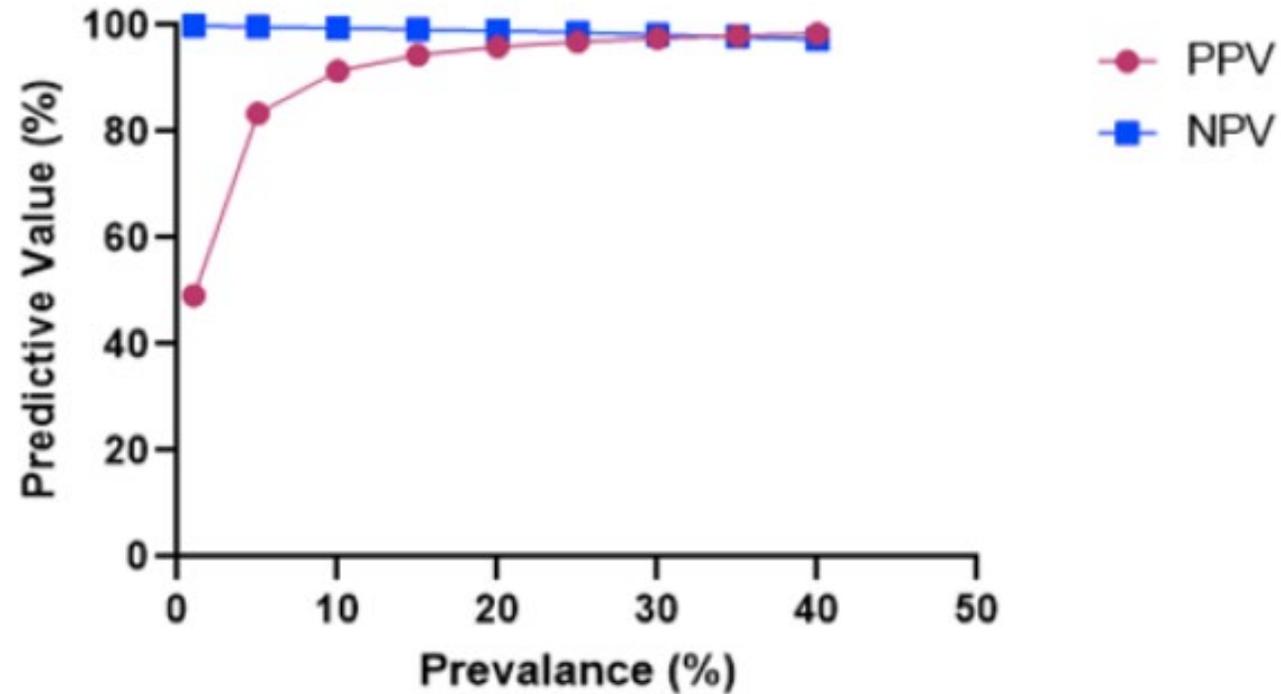


**Highest Risk**  
(200 cases/100,000 people in last 14 days)

**Estimated Active Infection Rate\* 1.43%**



# Predictive Model for Theoretical Test with 96% Sensitivity and 99% Specificity Vs Prevalence



<https://www.idsociety.org/practice-guideline/covid-19-guideline-serology/?referringSource=articleShare#Figure3>

# Second Consideration

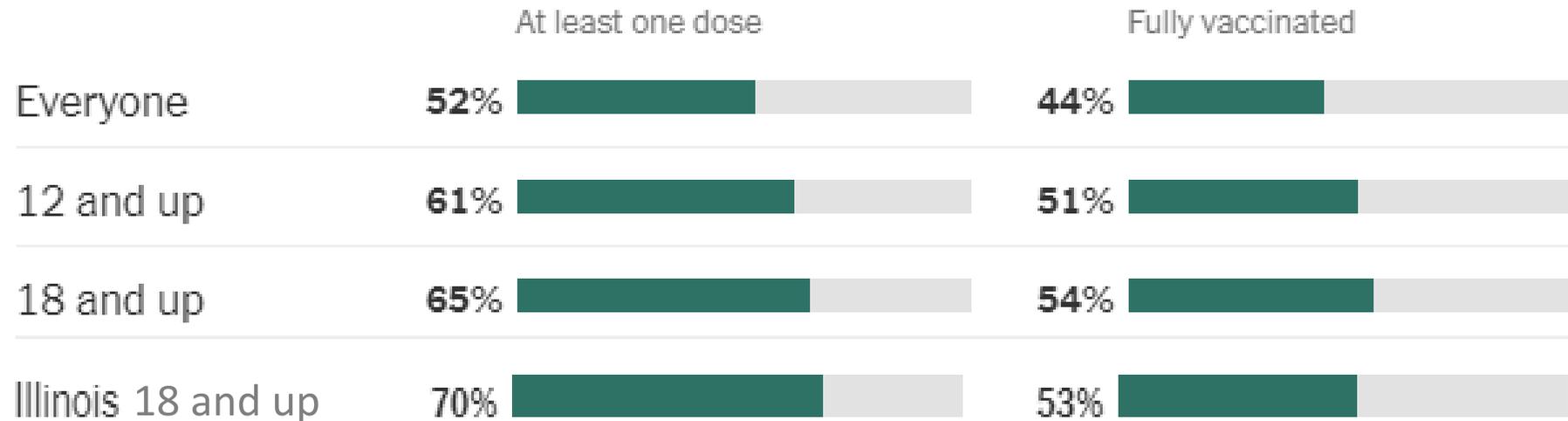
- Reduced cases in the community
- The lower the rate in the community the lower the rate at school?
  - Not exactly but makes sense to consider that the less activity in the community means:
    - Screening not useful
    - Mitigation steps not needed due to few cases arriving at schools
      - Masking not needed
      - Physical (social) distancing not needed

# Third Consideration



- Vaccination rates still rising further reducing the ability of the virus to circulate

## United States vaccinations\*



New York Times: 6/14/2021 <https://www.nytimes.com/interactive/2020/us/covid-19-vaccine-doses.html>



# Fourth Consideration

- School closure is bad for nearly everyone
  - Reduced socialization
  - Reduced learning
  - Disparities in access to learning
  - Increased mental health problems
    - Students
    - Families
    - Staff
  - Loss of potential that will take years to get back, if ever

## Spring 2020

- Higher rates of absenteeism
- Limited access to technology
- Lack of formal instruction plans

## 2020-21 School Year

- Continued gaps in access to technology
- Chronic absenteeism
- Measured learning loss
- Mental health impact

## Beyond 2020-21 School Year

- Benchmark grades
- Standardized assessments
- Graduation
- Future employment
- Health

Image produced by Megan Collins, MD

The CDC has yet to set their recommendations so here are ours



# Recommendations

- **COVID-19 exposure:** Unvaccinated children with exposure from a close contact to COVID-19
  - At school: should be tested and if negative return to school due to minimal spread in a classroom setting
    - Low secondary attack rate (0.7%) in the K-12 school environment and excessive learning days lost if kept out of school
  - At home: quarantine for minimum of 5 days and then test and if negative in school with a mask until 10 days post exposure
  - Quarantining of adult staff contacts who are unvaccinated and unmasked continues to be recommended
- **Vaccinated people don't require quarantining**
- **Symptom awareness:** Children ill with symptoms of COVID-19 should stay home and be tested and if negative return to school once symptoms have resolved
  - Wait for symptom resolution not for COVID concerns but following isolation issues due to cause
- **School-based temperature screening** at school entrance is not recommended
- **Asymptomatic screening:** COVID-19 screening testing of asymptomatic students or staff is not recommended when community transmission rates are low (100/100,000 cases per week) due to the chance of false positives

# Recommendations

- **Face coverings in recommended circumstances**

- Masking children indoors over 5 years old, as well as unvaccinated adults, should be recommended until a metric\* reached
  - Below that metric\*, masking in schools could be optional irrespective of vaccination status
- C.D.C. states that unvaccinated children do not need to wear masks outdoors except in crowds in areas with high rates of Covid-19 transmission
- The CDC does not require masking of vaccinated individuals, including teachers and staff
  - In the UK, indoor mask mandates were successfully removed for children >12 citing barriers to learning and communication on May 17, 2021 once the community transmission rate dropped to low levels and so far so good
  - Mandating face masks by teachers and staff prior to vaccination were associated with a lower incidence of COVID-19 in schools in a large US-based study

\*Metric could be when hospitalization rates fall below 5/100,000 people combined with at least 2/3 of adults having received at least one dose of a vaccine

# Recommendations

- **Ventilation:** Ventilation improvements including opening windows, doors and holding class and lunch outdoors can reduce risk of transmission
  - School-based ventilation systems should be properly maintained and assessed for air flow
- **Hand hygiene:** Hand washing (soap and water or hand sanitizer) before eating and after using the rest room is recommended
- **Respiratory hygiene:** Kleenex or clean reusable cloth/handkerchief may be used to limit droplet transmission
- **Enhanced cleaning:** High touch surfaces should be cleaned with standard frequency, but excess cleaning for SARS-CoV-2 appears to be low yield and is not necessary
- **Physical distancing:**  $\geq 3$  feet seating distance between students within the classroom has not been demonstrated to be correlated with COVID-19 spread
  - With low community level transmission, can likely dispense with any spacing requirements
  - If class sizes are reduced, staggered arrival times are preferable to hybrid learning to permit full time in person learning for all

# Summary

- School closures have been harmful to students
- Low rates in the community reduces the chance of COVID entering a school and allows for reduction in mitigation practices
- Vaccination changes everything
- Once an agreed upon low rate is achieved
  - Eliminate masking for children
  - Eliminate spacing requirement
  - Continue to monitor the situation
  - Continue to keep people away with COVID
  - Use common sense

**DAMMIT JIM**

**I'M A DOCTOR, NOT A FORTUNE  
TELLER**

# CDC Case Definition of Myocarditis

## Probable Case

Presence of at least 1 new or worsening of the following clinical symptoms

- Chest pain/pressure/discomfort, dyspnea/SOB/pain with breathing or palpitations

OR, infants and children <12 y/o may instead present with at least 2 of

- Irritability, vomiting, poor feeding, tachypnea, or lethargy

AND

At least 1 new finding of

- Troponin, abnormal ECG or rhythm monitoring findings consistent with myocarditis, or abnormal cardiac function or wall motion abnormalities on echocardiogram or cardiac MRI

AND no other identifiable cause of the symptoms and findings

## Confirmed Case

Presence of at least 1 new or worsening of the following clinical symptoms:

- Chest pain/pressure/discomfort, dyspnea/SOB/pain with breathing, or palpitations

OR, infants and children <12 y/o may instead present with at least 2 of

- Irritability, vomiting, poor feeding, tachypnea, lethargy

AND

- Troponin levels above upper limit of normal

AND

At least one new finding of

- Histopathological confirmation of myocarditis, or, cMRI findings consistent with myocarditis

AND no other identifiable cause of symptoms and findings

# Preliminary myocarditis/pericarditis reports to VAERS following dose 2 mRNA vaccination, Exp. vs. Obs. (data thru May 31, 2021)

8.8% of doses admin

Age groups	Doses admin	Crude reporting rate*	Expected†,‡ Myocarditis/pericarditis cases	Observed† Myocarditis/pericarditis reports
12–15 yrs	134,041	22.4	0–1	2
<b>16–17 yrs</b>	<b>2,258,932</b>	<b>35.0</b>	<b>2–19</b>	<b>79</b>
<b>18–24 yrs</b>	<b>9,776,719</b>	<b>20.6</b>	<b>8–83</b>	<b>196</b>
25–39 yrs	26,844,601	5.0	23–228	124
40–49 yrs	19,576,875	3.0	17–166	51
50–64 yrs	36,951,538	1.3	31–314	39
65+ yrs	42,124,078	0.9	36–358	26
NR	—	—	—	11

n=277 reports  
52.5% of total reports

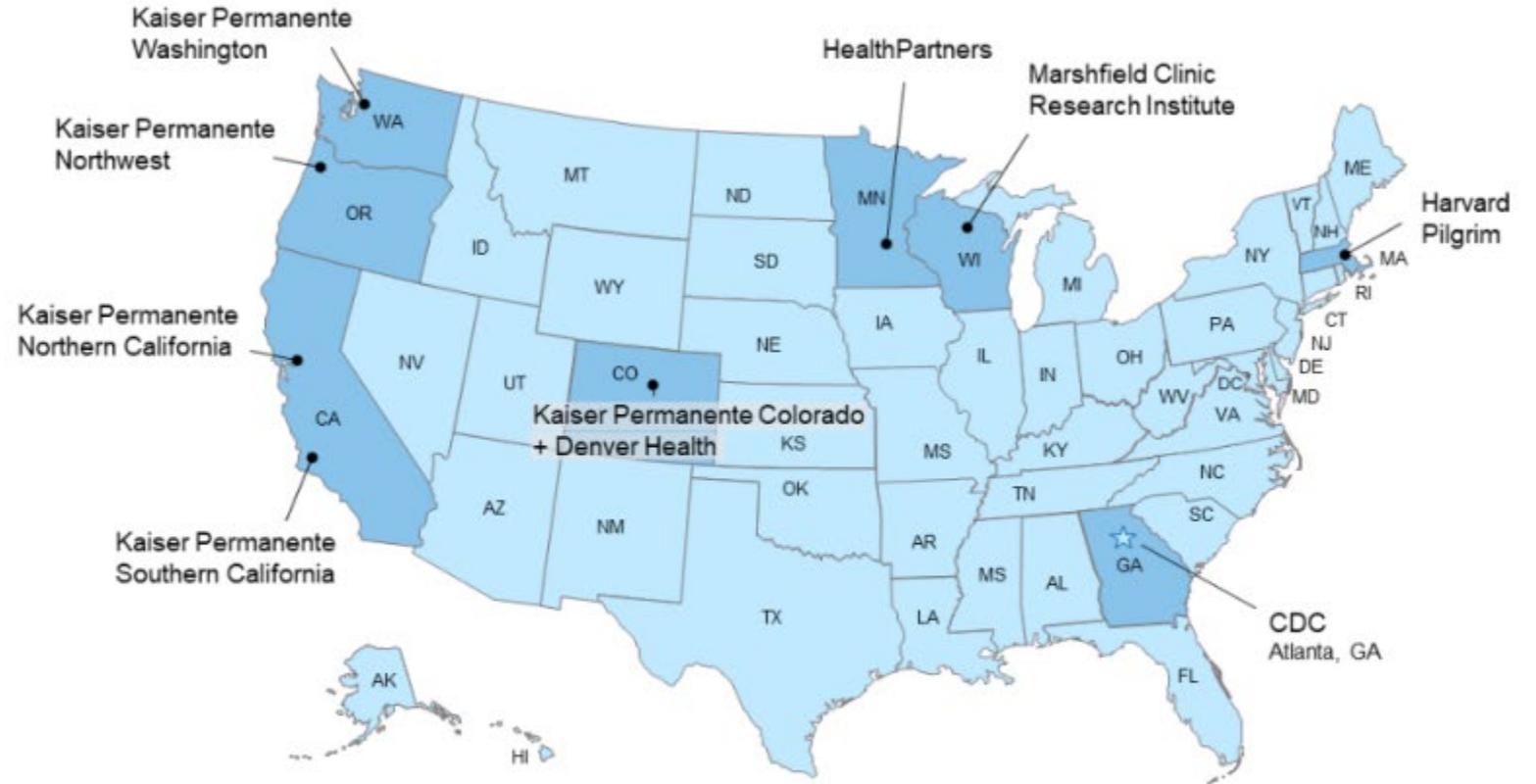


\* Per million doses administered; † Assumes a 31-day post-vaccination observation window; 528 reports with symptom onset within 30 days of vaccination shown; ‡ Based on Gubernot et al. U.S. Population-Based background incidence rates of medical conditions for use in safety assessment of COVID-19 vaccines. Vaccine. 2021 May 14;S0264-410X(21)00578-8.



VSD

Vaccine  
Safety  
Datalink



- 9 participating integrated healthcare organizations
- Data on over **12 million** persons per year



<https://www.fda.gov/media/150054/download>

# Myocarditis/pericarditis incidence in VSD in 21-day risk interval, ages 16-39 years old (data thru May 29, 2021)

Vaccine(s) (dose #)	Cases	Doses admin	Rate per million doses (95% CI)
mRNA (both doses)	22	2,546,874	8.6 (5.4–13.1)
mRNA (dose 1)	4	1,428,872	2.8 (0.8–7.2)
mRNA (dose 2)	18	1,118,002	16.1 (9.5–25.4)
Pfizer-BioNTech (dose 1)	1	846,765	1.2 (0.0–6.6)
Pfizer-BioNTech (dose 2)	7	671,899	10.4 (4.2–21.5)
Moderna (dose 1)	3	582,107	5.2 (1.1–15.1)
Moderna (dose 2)	11	446,103	24.7 (12.3–44.1)



# Reported Cardiovascular Complications in COVID-19: Adults

American College of Cardiology website  
<https://www.acc.org/latest-in-cardiology/articles/2021/02/05/19/37/covid-19-as-a-possible-cause-of-myocarditis-and-pericarditis>

Complication	Incidence	Notes
Acute cardiac injury*	8-22% Up to 22% in ICU Up to 59% in those who died	Most commonly reported cardiovascular complication
Pulmonary Thrombosis, Arterial and Venous Thromboembolism	16-49% in ICU (case series)	Deep-vein thrombosis, PE, ischemic stroke, arterial thromboembolism
Heart Failure	Few data: 52% in those who died and 12% in those who recovered	Mechanisms not completely clear, probably related to myocardial lesion and septic shock
Acute coronary syndromes	Case reports: 44.4% with ST segment elevation on ECG had clinical diagnosis of MI, 50% underwent coronary angiography with detection of obstructive disease in 2/3.	High variability in presentation and prevalence of non-obstructive disease, poor prognosis
Arrhythmia	16.7% overall; 44.4 in severe illness, 8.9% in mild cases	Both tachyarrhythmia and bradyarrhythmia can occur (limited data)
Myocarditis	Case reports	At present demonstration of SARS-Cov-2 in one report but in macrophages, not myocardial cells
Pericardial Diseases	Case reports	Pericardial effusions

# Reported Cardiovascular Complications in COVID-19: Pediatric

- Not well studied
  - At least one review listed an incidence of 0.6% (World J Clin Cases. 2020 Nov 6; 8(21): 5250–5283)
- More data needed, but clearly much higher than what might be happening with the vaccine