

**WELCOME!**

## Why does COVID-19 testing in K-12 schools still matter?

 The world leader in serving science



Welcome to today's session!

# Why does COVID-19 testing in schools still matter?

Today's speakers:



**Mara Aspinall**

Professor of Practice, Biomedical Diagnostics  
Arizona State University  
Managing Director, Health Catalysts Group



**Karen Cormier**

Senior Marketing Manager, Genetic Testing  
Solutions Group, Thermo Fisher

# Introducing



## **Mara Aspinall**

*Professor or Practice, Biomedical Diagnostics*

*Arizona State University*

*Managing Director, Health Catalysts Group*



# Agenda

- **The Good, the Bad and the Ugly**
- School In-Person Index
  - Where did we end in the Spring
- School COVID Safety
  1. Vaccination
  2. Mitigation
  3. Confirmation
- School Funding Options for Testing

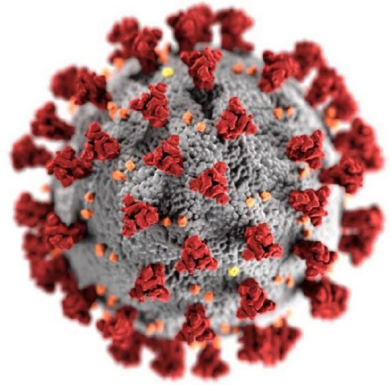


# The Good, the Bad and the Ugly

- The Good
  - Cases are way down from a year ago (but recent surge from Delta is very concerning)
  - 50%+ of US adults are vaccinated (80% for teachers)
  - 25-35% of 12–17-year-olds are vaccinated
  - Vaccines are highly effective (50-90% depending on variant)
- The Bad
  - Only 50% of adults and net 15% of all kids are vaccinated
  - Few mitigation measures remain in place
  - Delta Variant is more transmissible than any variant we have seen so far
- The Ugly
  - All viruses mutate – more mutations will come
  - At least 20% and maybe 50+% people are completely asymptomatic



# The Making of a Variant



...UUU UUA AAC CGG...

mRNA strand is  
29,903 bases long

*A random  
"Mutation" occurs*

...UU**C** UUA AAC CGG UUA...

No change because  
UUU and UUC  
code the same protein

*More mutations  
occur*

...UU**C** UUA **CAC** CGG U**CA**...

This mutation changes  
the protein and a  
new "Variant" is born

No effect on  
infectivity, virulence,  
severity or mortality  
**"VARIANT OF  
NOTE"**

Growing its  
presence in the viral  
population  
**"VARIANT OF  
INTEREST"**

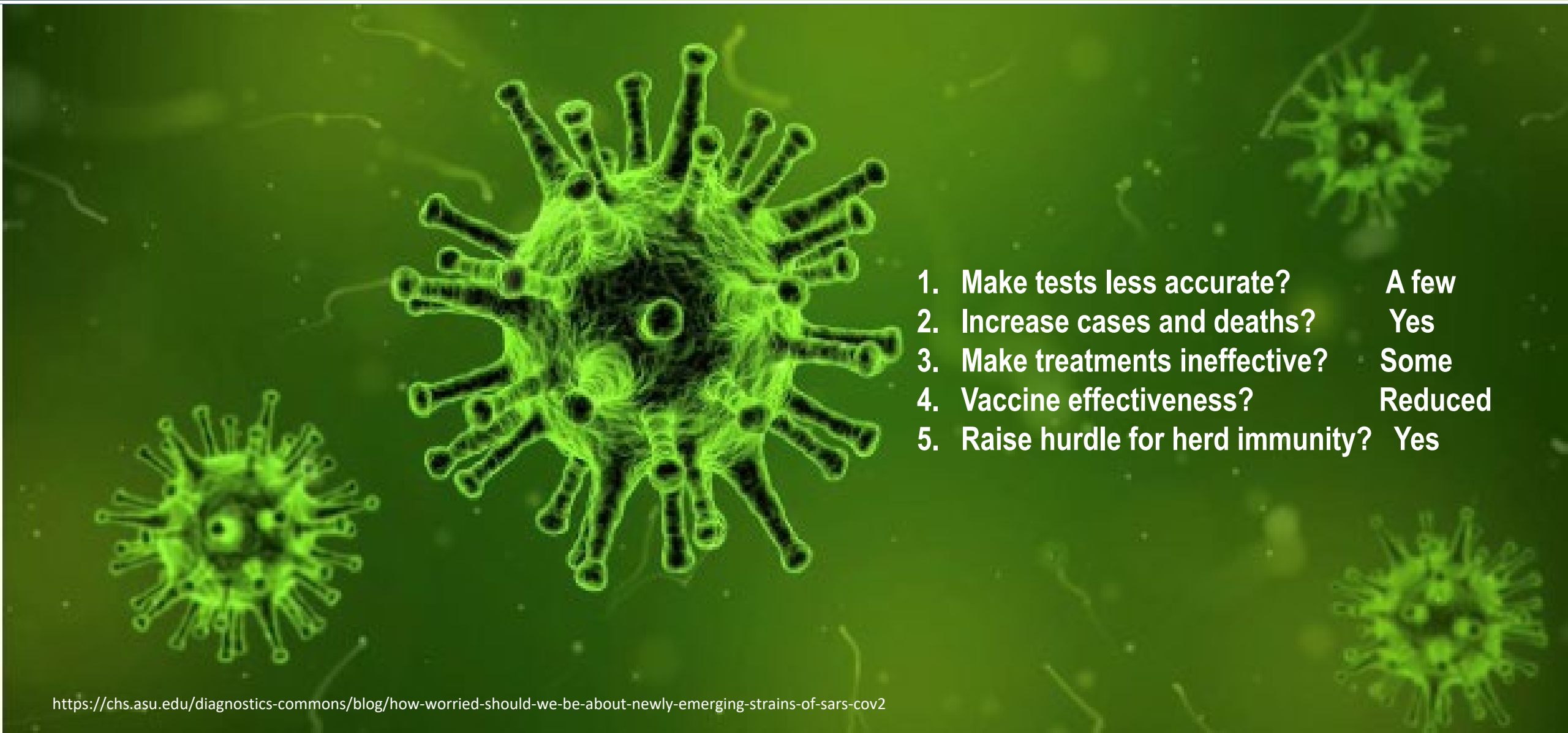
Early confirmation of  
effect on patients  
**"VARIANT OF  
CONCERN"**

*Consensus  
that a  
variant is  
significant  
and well  
established*

A new  
**"STRAIN"**  
is born



# SARS-CoV-2 Variants: Five Questions

- 
1. Make tests less accurate? A few
  2. Increase cases and deaths? Yes
  3. Make treatments ineffective? Some
  4. Vaccine effectiveness? Reduced
  5. Raise hurdle for herd immunity? Yes

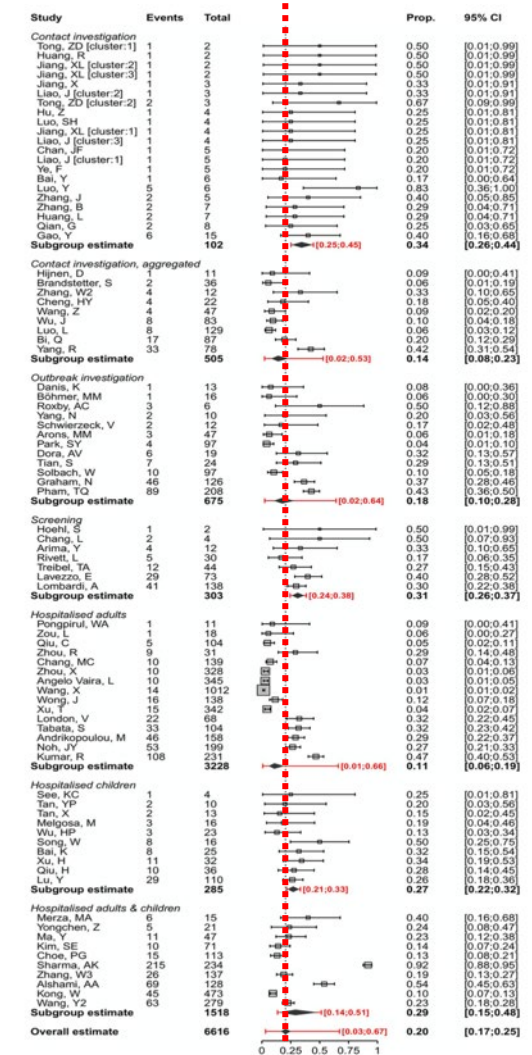


# High Rate of Asymptomatic Cases Require Testing Vigilance

Many studies - Wide variation

## 20-60% ASYMPTOMATIC ADULTS CASES (ALL COVID INFECTIONS)

- 19% of 213 isolated Korean contacts; Ct same in asymptomatics<sup>1</sup>
- 20% (17-25%) in 79 paper meta-study<sup>2</sup>
- 32% College students asymptomatic of whom 19% infected others, close to symptomatics with 25% onward infection<sup>3</sup>
- 40-45% “narrative review”<sup>4</sup>
  - 43% Icelandic adult screening – at time of testing
  - 42% Vo’ Italy - tracked and confirmed over time
  - 46.5% Diamond Princess
  - 60% USS Roosevelt & Charles de Gaulle (younger, fitter population)
  - 52.2% Seattle WA Nursing home
- 52% of 3105 PCR+ of 19.4 million international arrivals to China<sup>5</sup>



<sup>1</sup>Ra et al, BMJ 8/17/20

<sup>2</sup>Buitrago-Garcia et al; PLOS Medicine 9/22/20

<sup>3</sup>Krieg et al; medRxiv 7/8/21

<sup>4</sup>Oran/Topol; Annals of Int Med 9/1/20

<sup>5</sup>Ren et al; JAMA 2/2/21





# High Rate of Asymptomatic Cases Require Testing Vigilance

Seattle WA  
community screening<sup>1</sup>

**ASYMPTOMATIC**

**38%**      **7%**

CHILDREN      ADULTS

Similar viral loads

Child contacts of confirmed  
cases in Korea<sup>2</sup>

**ASYMPTOMATIC**

**PRE-SYMPTOMATIC\***

**22%**                      **25%**

Long post-infection viral shedding  
(19-20 days)

\*Pre-symptomatic at time of diagnosis, developed symptoms median 2.5 days post COVID-19 diagnosis.

<sup>1</sup>Chung et al; JAMA Pediatrics 6/2021.

<sup>2</sup>Han et al; JAMA Pediatrics 1/2021.



# Agenda

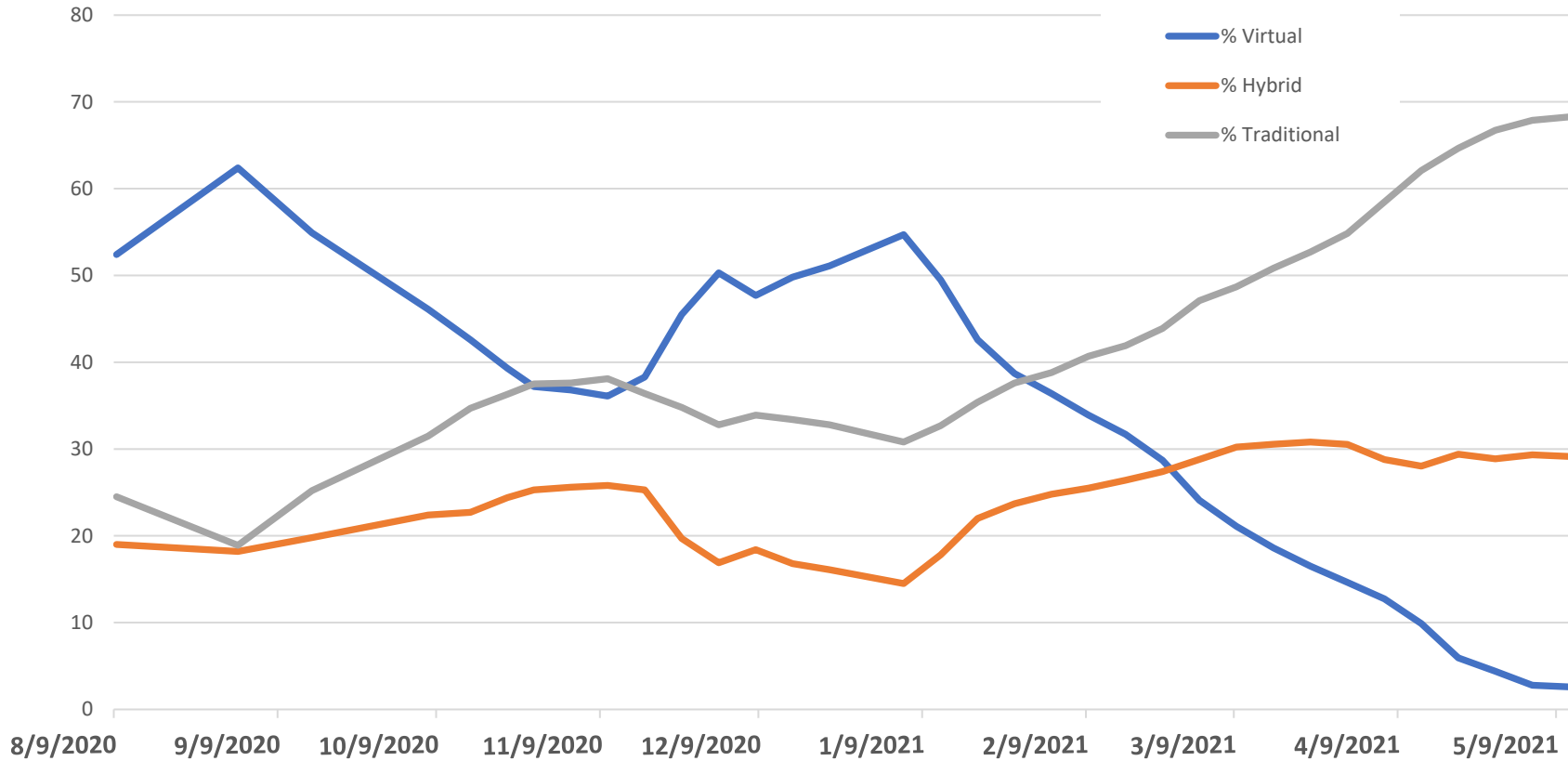
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# Returning to Classroom Instruction (K-12 Schools)

**END OF YEAR  
7/5/21**

## U.S. K-12 LEARNING PLAN TRENDS



**2.1%**  
Virtual Instruction

**28.2%**  
Hybrid Instruction

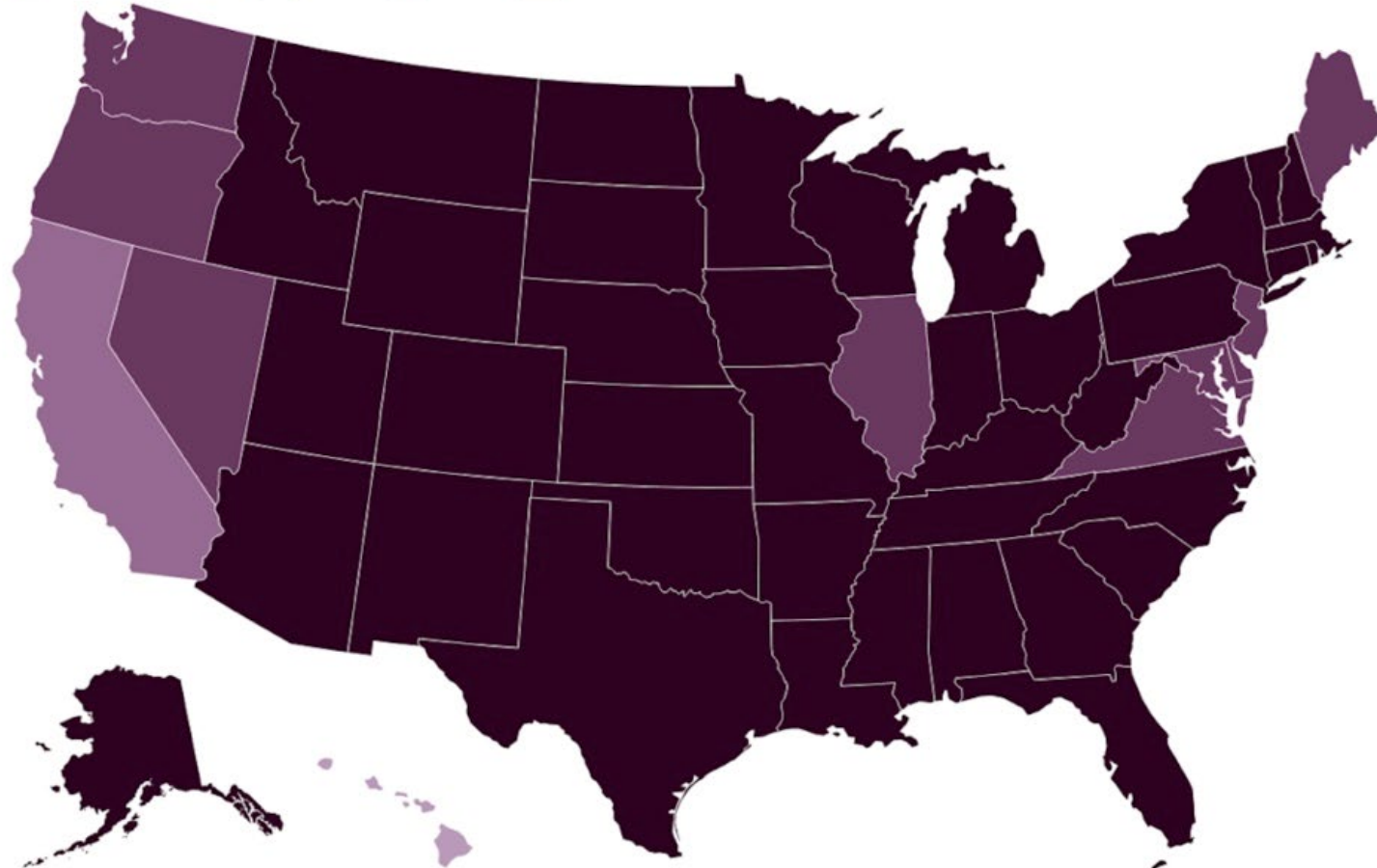
**69.7%**  
Traditional Instruction



# In-Person Index of Schools: Nationwide

## In-Person-Index as of 6-1-2021

0-20 20-40 40-60 60-80 80-100



**In-Person Index:**  
Weighed Average of Instruction Type by School.  
Index weights % virtual instruction schools at 0, % hybrid instruction schools (2-3 days a week in-person) at 50 and % traditional schools (5-days in person) at 100



# Agenda

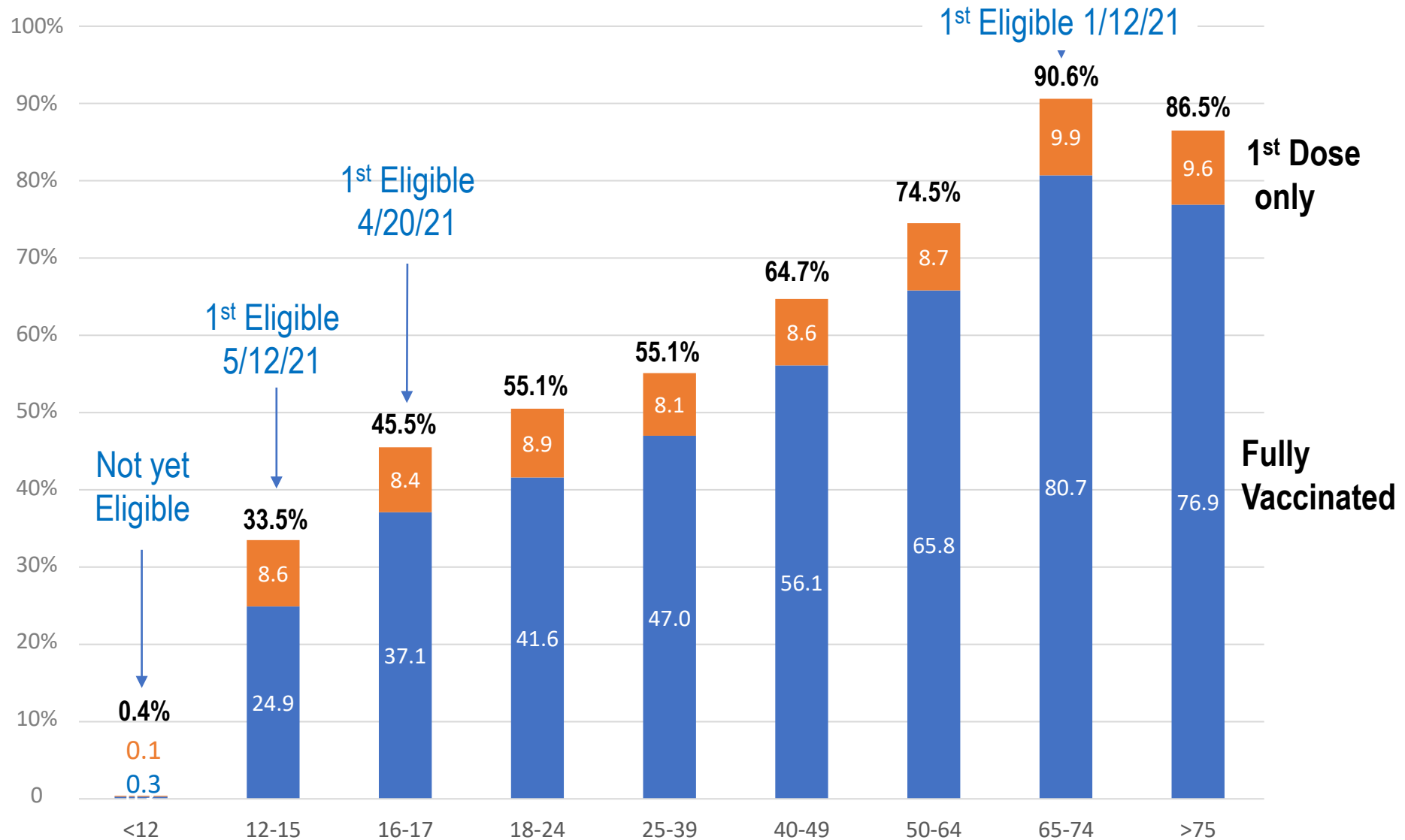
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# Younger Age Groups are Less Vaccinated, and May Stay That Way



THE WALL STREET JOURNAL.  
Young Americans aren't getting vaccinated, jeopardizing COVID fight



Source: [CDC COVID data tracker](#), data July 12, 2021

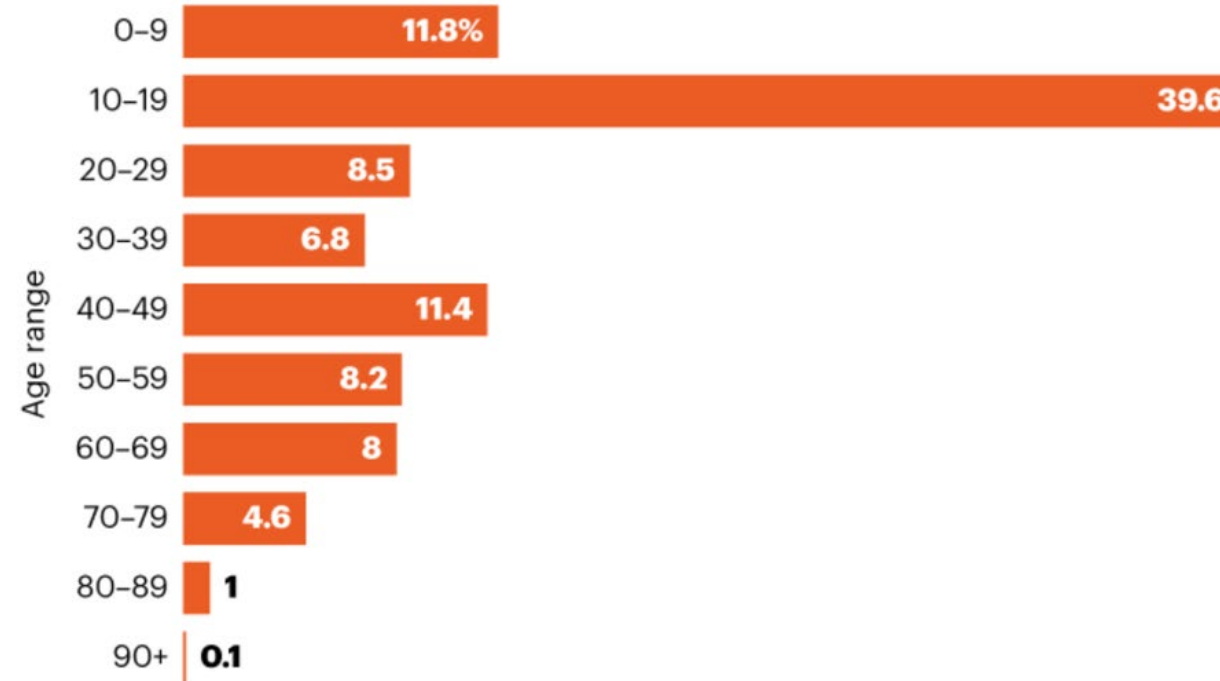


# In a Highly Vaccinated Population – Israel COVID Spikes in Unvaccinated Middle and High School Children

## TRENDING YOUNGER

With the majority of adults in Israel now vaccinated, just over half of the country's new COVID-19 cases in the month up to 5 July were in people aged 19 and under.

### Proportion of recent COVID-19 cases in Israel by age group



©nature



# School options: Testing vs. Quarantine – Testing Wins

**101 UK High Schools**  
13,500 Staff  
186,500 Students  
11,800 contacts

Intervention Group: 40% fewer student days lost and 60% fewer COVID related staff absences

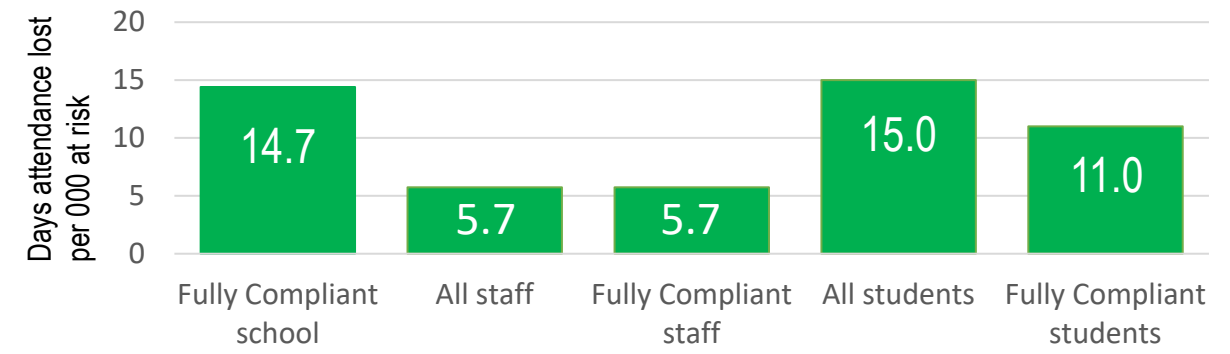
**Control Group**  
76 UK High Schools

- 10 days Quarantine
- 338 index cases identified
- 5097 contacts
- 22,466 lost school days
- 1.8% days lost



**Intervention Group**  
86 UK High Schools

- 5 days daily antigen tests
- 450 index cases
- 6721 contacts
- 22,378 lost school days
- 1.47% days lost



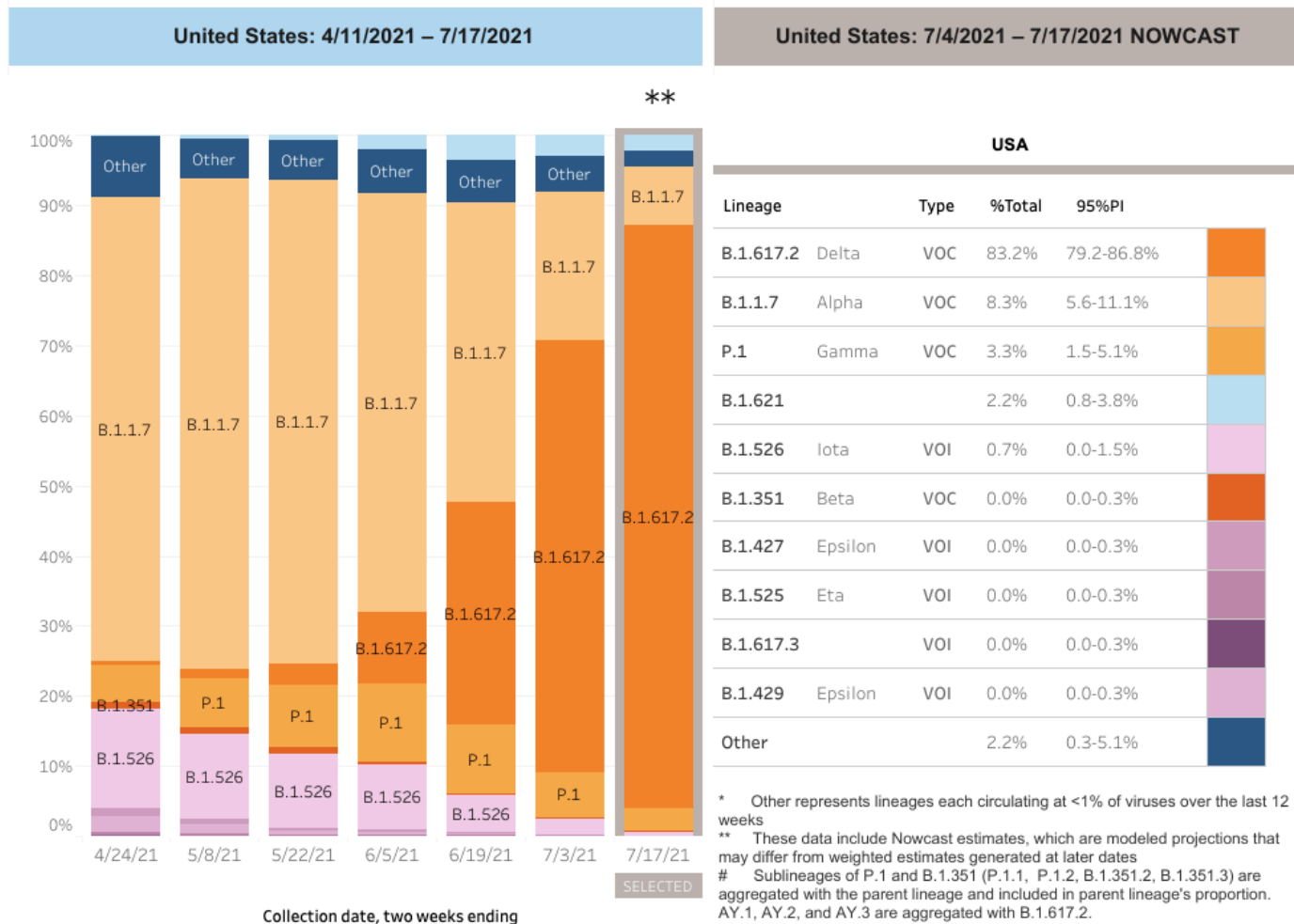
Source: adapted from data in [Young et al](#), A cluster randomised trial of the impact of a policy of daily testing for contacts of COVID-19 cases on attendance & transmission in UK secondary schools





# Rise of the Delta $\delta$ Variant

## SARS-COV-2 LINEAGES: NATIONAL NOWCAST ESTIMATES



### VARIANT TIMEFRAME TO REACH DOMINANT U.S. STRAIN

$\alpha$  (B.1.1.7)  
3 months

$\delta$  (B.1.617)  
1 month

and is powering the surge among the unvaccinated



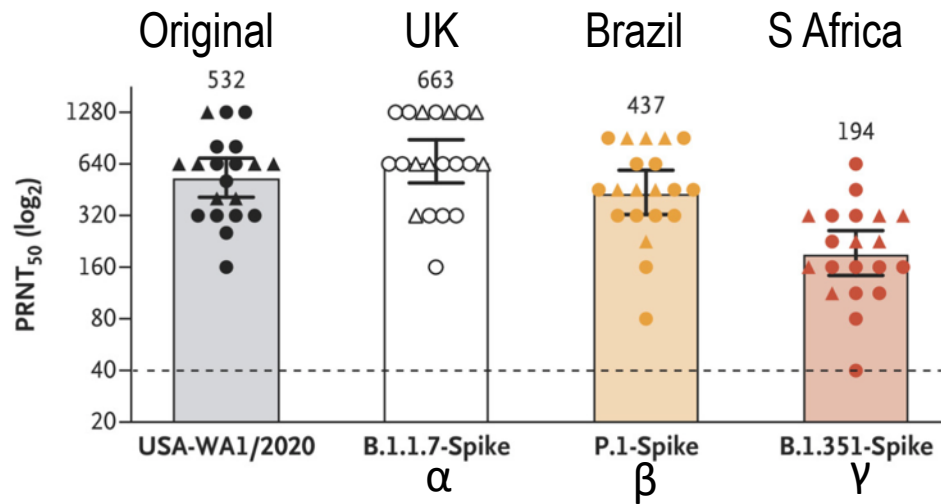
# mRNA Vaccine Protection Persists as Variants Emerge

“90+% effective in a real-world setting”

- CDC MMWR 3/29/21

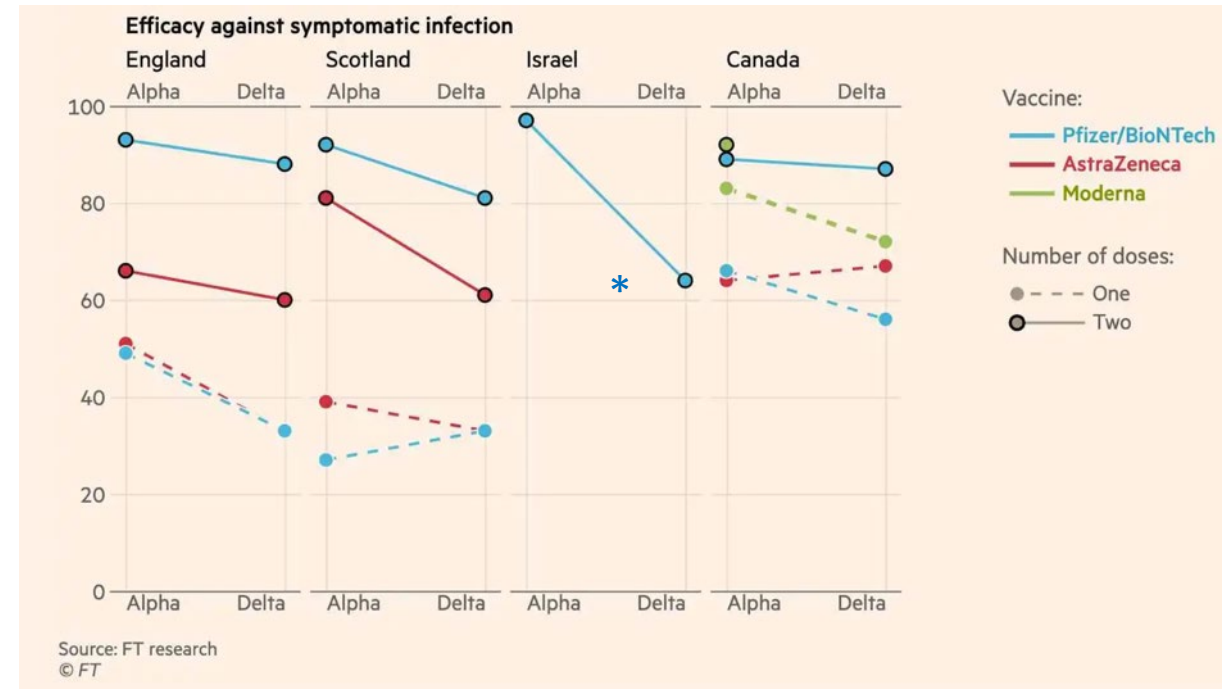
- 80% effective after first dose
- 3,950 healthcare personnel, tested weekly; asymptomatic and symptomatic identified
- One tenth the cases after vaccination (161 cases without 16 cases with vaccine)
- Consistent with Israel data, UCLA Health workers and others

Vaccine confirmed effective against  $\alpha$ ,  $\beta$  &  $\gamma$  variants



Source: NEJM 3/8/21

...and appear to remain effective against  $\delta$  variant at lower level



\* Single data point, sharply lower than prior month's 90+%, may be revised up

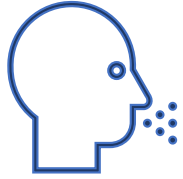


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# Mitigations



**HEALTH CHECKS /  
RESPIRATORY ETIQUETTE**



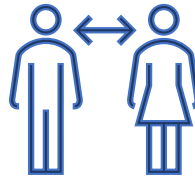
**HANDWASHING**



**CLASSROOM / SCHOOL  
BUILDING HYGIENE**



**SURVEILLANCE /  
MONITORING**



**PHYSICAL DISTANCING  
6 / 3 FEET**



**MASKING**



# CDC Mask Guidance

## UPDATE

“

Given new evidence on the B.1.617.2 (Delta) variant, CDC has updated the [guidance for fully vaccinated people](#). CDC recommends universal indoor masking for all teachers, staff, students, and visitors to K-12 schools, regardless of vaccination status. Children should return to full-time in-person learning in the fall with layered prevention strategies in place.

”

CDC – July 27<sup>th</sup>



COVID-19



MENU >

## Schools and Child Care Programs

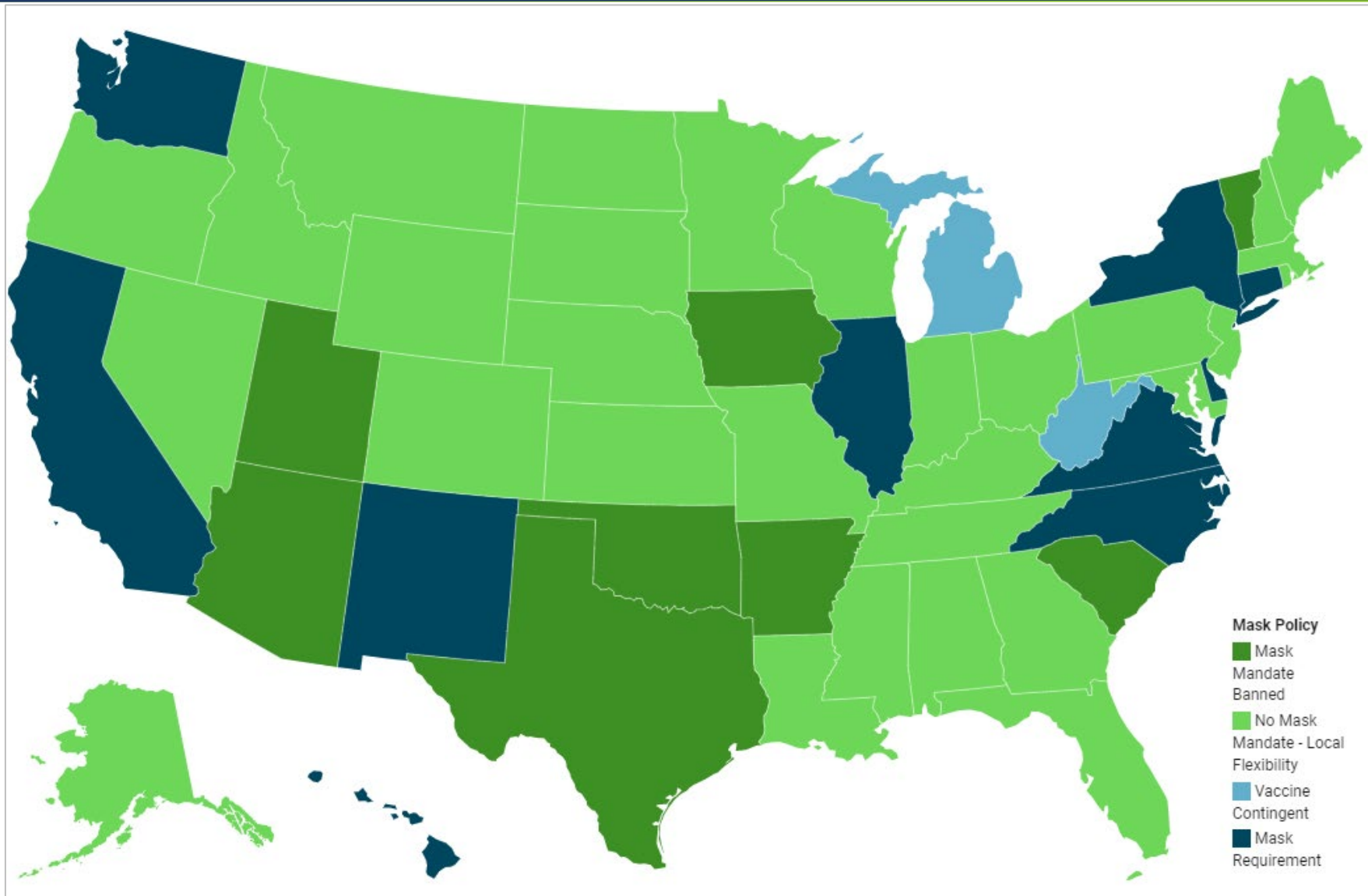
Plan, Prepare, and Respond

Updated July 9, 2021 Languages Print





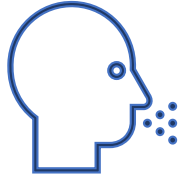
# Current School Mask Policy Around the Country



- 22% Masks required**  
(school-wide state mandate)
- 20% Mask mandates banned**  
(local districts do NOT have flexibility to mandate masks)
- 55% No mask mandate but allows local flexibility**  
(state lifted mask mandate; local districts have flexibility to mandate masks)
- 3% Vaccine contingent**  
(vaccination status determines mask use; local districts have flexibility to mandate masks)



# Mitigations



**HEALTH CHECKS /  
RESPIRATORY ETIQUETTE**



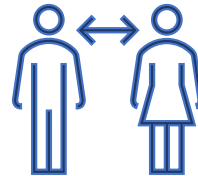
**HANDWASHING**



**CLASSROOM / SCHOOL  
BUILDING HYGIENE**



**SURVEILLANCE /  
MONITORING**



**PHYSICAL DISTANCING  
6 / 3 FEET**



**MASKING**

**TESTING REMAINS CRITICAL TO SUPPLEMENTING ANY MITIGATION STRATEGY**



# Agenda

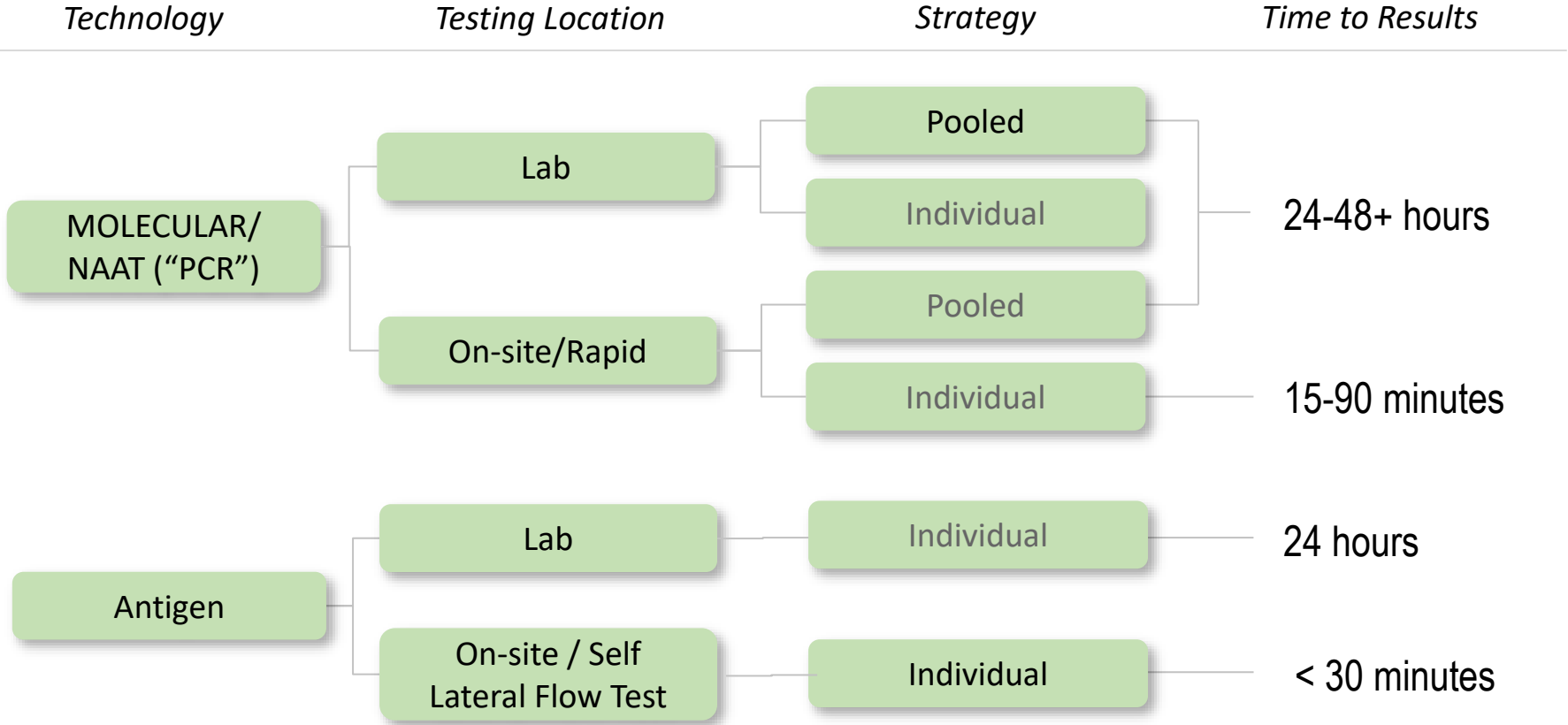
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# HOW TO CHOOSE A TEST: ASYMPTOMATIC SCREENING OPTIONS

Multiple technologies and systems needed to meet school demand and diversify the supply chain














## TYPES OF SCREENING TESTING:



Both options: data management handled by test provider



# Choosing The Right Testing Strategy

Model-estimated >90% infection transmission reduction	Model-estimated 80-90% infection transmission reduction	Model-estimated 70-80% infection transmission reduction	Model-estimated 60-70% infection transmission reduction
 Testing daily	 Testing every 1-3 days	 Testing every 1-3 days	 Testing every 3-7 days
 Daily testing with 80%+ sensitive tests and results in one day	 Daily testing with 70%+ sensitive tests and results in one day	 Daily testing with 85%+ sensitive test and results in two days	 Testing every three days with 70%+ sensitive tests and results in one day
 <b>OR</b> Daily testing with 70%+ sensitive tests and immediate results	 <b>OR</b> Testing every three days with 80%+ sensitive tests and immediate results	 <b>OR</b> Testing every three days with 97%+ sensitive tests and results in one day	 <b>OR</b> Weekly testing with 97% sensitive test and immediate results
		 <b>OR</b> Testing every three days with 70%+ sensitive tests and immediate results	

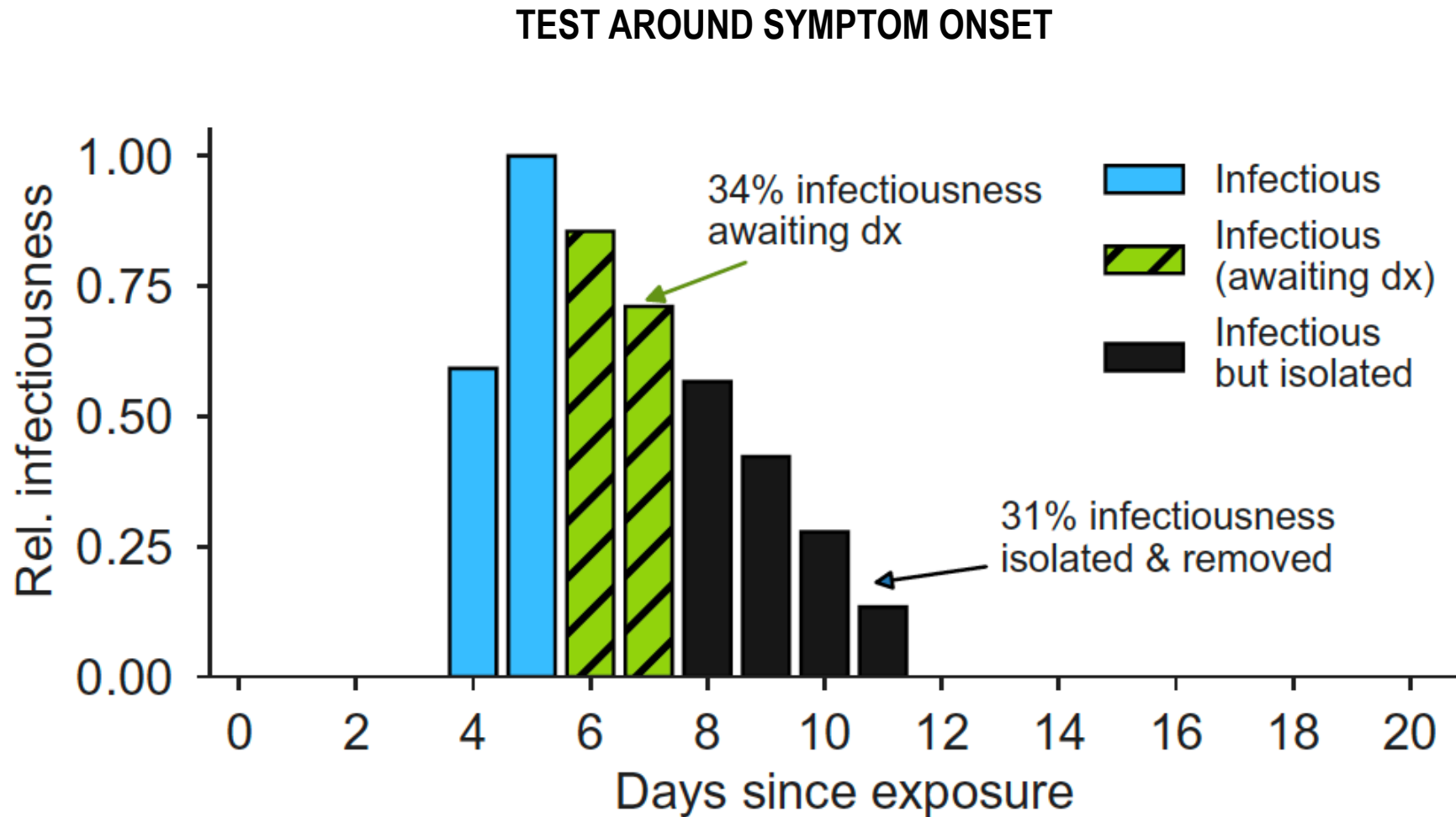
## MORE THAN ONE WAY TO GET THE SAME RESULT

Combination of:

- Test sensitivity
- Test frequency
- Time to results
- Logistics
- Costs



# Fast & Frequent Wins Over Slow & Sensitive



# WHAT DO SCHOOLS DO: RUBBER HITS THE ROAD – OPERATION OVERVIEW

There are 4 key steps to executing K-12 NTAP, but each component within the key steps must be designed and executed based on individual needs of the school

## Key steps

1) Coordination & administration	2) Testing modality selection	3) Facility set-up	4) Results reporting
<ul style="list-style-type: none"> <li>Establish key positions &amp; roles</li> <li>Hire, train and build partnerships with local public health officials</li> <li>Create a communication plan for updates and changes to the process</li> <li>Receive authorization and registration for testing</li> </ul>	<ul style="list-style-type: none"> <li>Choose testing partner(s)</li> <li>Finalize protocols for Step 1 Asymptomatic Screening and Step 2 Follow-up Testing for positive pools</li> <li>Decide on Initiation Testing</li> </ul>	<ul style="list-style-type: none"> <li>Set-up on-site, centralized, decentralized or other physical models</li> </ul>	<ul style="list-style-type: none"> <li>Decide reporting strategy</li> <li>Establish procedures for reporting positive results and confirmatory testing</li> </ul>

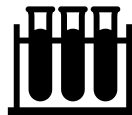
## Considerations for tailoring design and execution



Local epidemiology



Student population needs (age, special needs, etc.)



Access to approved contracts and vendors



Proximity to labs



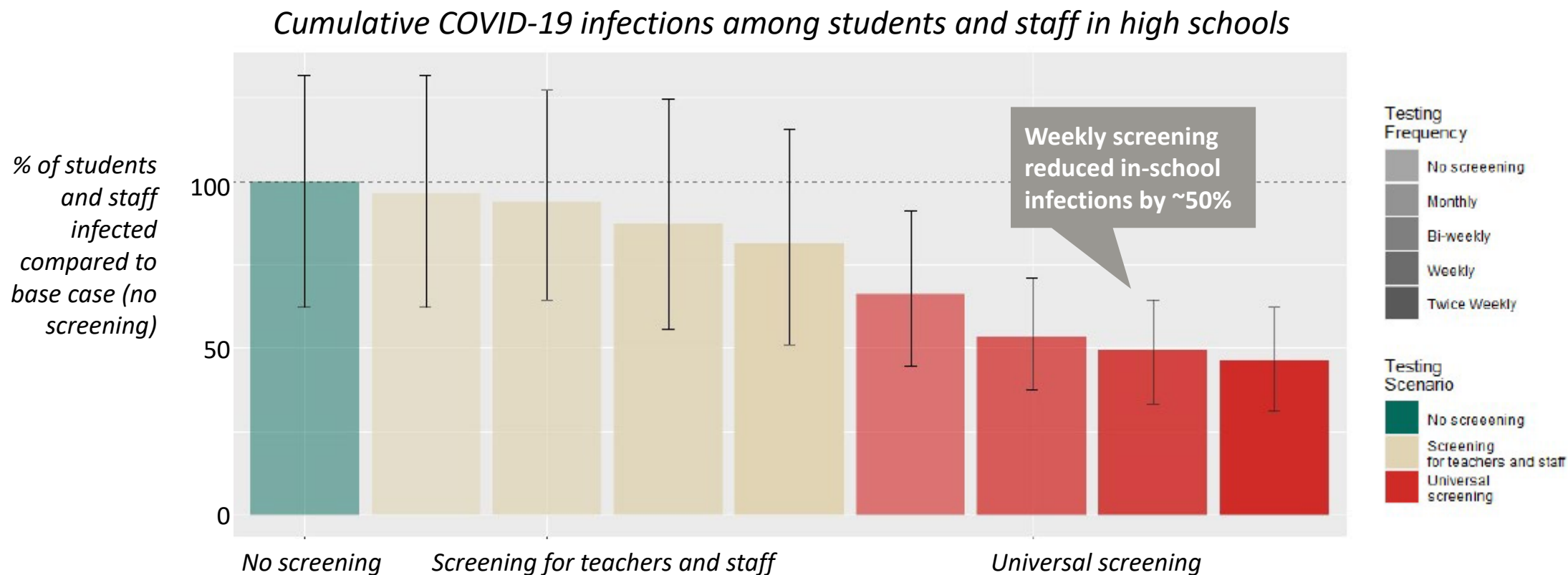
Human and financial resources



Number of students, teachers and staff

# REGULAR TESTING IN SCHOOLS CAN REDUCE INFECTION

Evidence from Mathematica, supported by The Rockefeller Foundation, found that **weekly testing** of all students, teachers and staff can **reduce in-school infections by an estimated 50%**



# TESTING BRINGS STUDENT, PARENT AND TEACHER CONFIDENCE

“I feel **more safe now knowing solid facts** about who has it and that the people who have it are not at school. So, it's keeping everything safer.” - *Parent*

*Participants strongly supported the use of testing to confidently return to in-person learning*

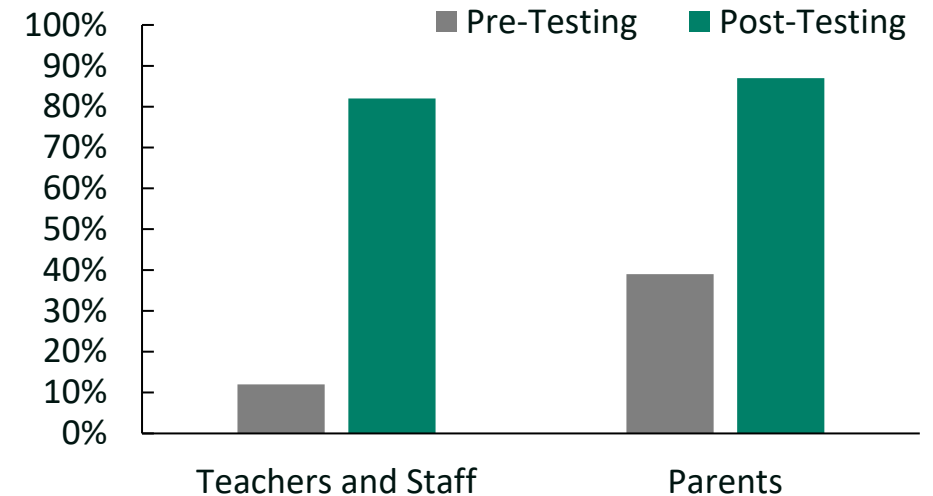


UNITEDHEALTH GROUP

SURVEY RESULTS (% agree/strongly agree)	Parents	Students	Staff
Testing students, staff and teachers on a regular basis is important to ensure that school can remain open and the WIS community can be as safe as possible	91.8	95.1	92.6
Post-launch: I am open to being part of a pooled testing protocol once or twice a week, with an individual confirmatory test required if the pool is positive	90.3	93.4	98.8
I feel that students or teachers who refuse to be tested individually or as part of a pool on a frequent basis should not be allowed to attend in person classes	80.4	83.13	74.1

*Baseline testing increased confidence of safety of in-person learning*

Reported Confidence in Wellesley Public Schools



# SCHOOL PREVALENCE RATES ARE 10X LOWER THAN COMMUNITY RATES

Aggregate data across multiple schools and their contiguous communities shows **average school positivity is 0.25% to 0.5%** while surrounding **community positivity is ~ 7.23%\***



**NYC**

**0.53%**  
positivity  
rate in K-12  
schools

**5.60%**  
positivity rate  
in community



**COLORADO**

**0.5%**  
positivity  
rate among  
teachers

**4%**  
positivity  
rate across  
the state

**CDC and others support a return to in-person schooling, citing low prevalence rate in schools as a key part of the justification**

Disclaimer: It is important to note that community testing is an opt-in process, and the actual community positivity may be different

\*Calculated by aggregating data collected by Ginkgo, CiC Health and JCM Analytics

# SUCCESSFUL K-12 TESTING: MASSACHUSETTS SCHOOLS

## Program overview:

- **Weekly testing** for every classroom across the state (**900K+ students**)
- Students and staff **self-swab** with a lower nasal swab
- **10+ swabs pooled together** and run using an accurate molecular test
- Samples processes at **local and regional labs**
- **Follow-up testing** for individuals in positive pools using Abbot BinaxNOW

## Initial data:

**154**  
school districts have  
rolled out testing



**940 or 50%**  
of public schools  
participating



**~13,000 tests**  
in first week of  
testing



## THE **Massachusetts Program**



The Boston Globe

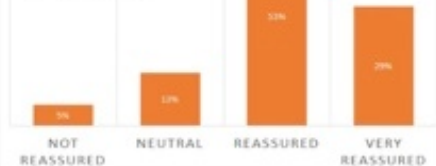
### Baker announces coronavirus pool testing to be made available to all Massachusetts public schools

By James Vaznis Globe Staff, Updated January 8, 2021, 1:53 p.m.



### Staff Level of Reassurance After Results of Baseline Testing

82% of staff were reassured in the safety of returning to school following the results of baseline testing.



## Boston Herald

Massachusetts teachers unions laud Charlie Baker's new coronavirus pool testing program for schools

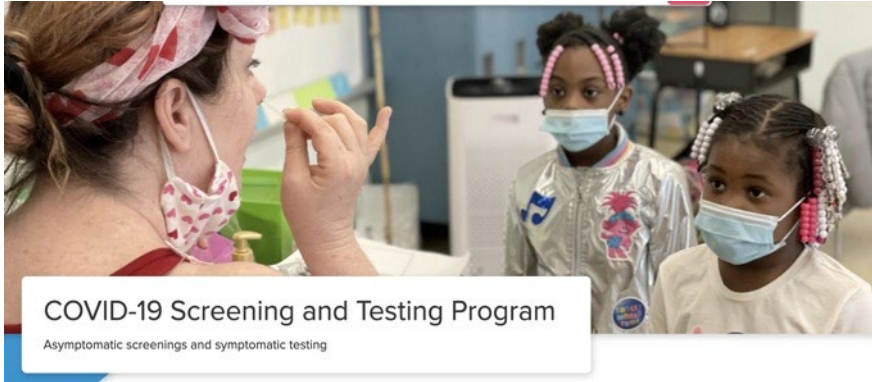


### WELLESLEY PUBLIC SCHOOLS *Learning • Caring • Innovating*



# SUCCESSFUL K-12 TESTING: BALTIMORE CITY SCHOOLS

Baltimore City Schools have been utilizing weekly testing with different systems for elementary, middle and high schools



## Current status:

- ~10K students and staff tested
- 750+ pools
- 78 schools (soon to be 110)

## Common characteristics:

- Weekly testing
- Parent consent is required for in-person learning, which includes Covid-19 screening/testing

## Elementary and middle schools:

- Students and staff self-collect with lower nasal swabs
- 5-25 individuals pooled together
- Samples processed at local or regional lab
- Results ~24 hours from when samples arrive at the lab
- If a positive result, classrooms will quarantine for 2 weeks and follow up with individual PCR tests

## High schools:

- Students and staff self-collect individual saliva samples
- Samples processed at a mobile lab in DC
- Results ~8 hrs from when samples arrive at the lab
- Individuals and close contacts will quarantine for 2 weeks if a positive result



## Baltimore City Schools To Offer Weekly COVID-19 Testing For Students, Staff

By Kelsey Kushner February 24, 2021 at 11:15 pm  
Filed Under: Baltimore, Baltimore City Public Schools, Baltimore News, Coronavirus Outbreak In Maryland: WJZ Complete Coverage, COVID-19, Local TV, Talkers

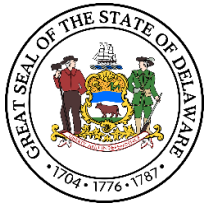


## Baltimore City Schools re-open with voluntary in-person learning

by Rachel Aragon | Monday, March 1st 2021

# SUCCESSFUL K-12 TESTING: DELAWARE PUBLIC SCHOOLS

School testing in Delaware, a collaborative effort between the Delaware Health and Social Services and Department of Education, has successfully demonstrated a **scalable, in-person, low-resource program utilizing BD antigen tests**. This program started in a handful of public charter schools and has quickly expanded across the state with buy-in from parents, staff and administrators



## Current status:

**75+** public schools participating

**33%** of schools in Delaware

**5,000+** students and staff tested

## Easy to implement:

- Flexible program implemented by school staff. Estimated need for 2-3 FTE / 1,000 people
- Automated results reporting expected to simplify workflow further

## Return to school:

- Positive cases have been identified without impacting school opening
- Schools see parents switching back from virtual to in-person education

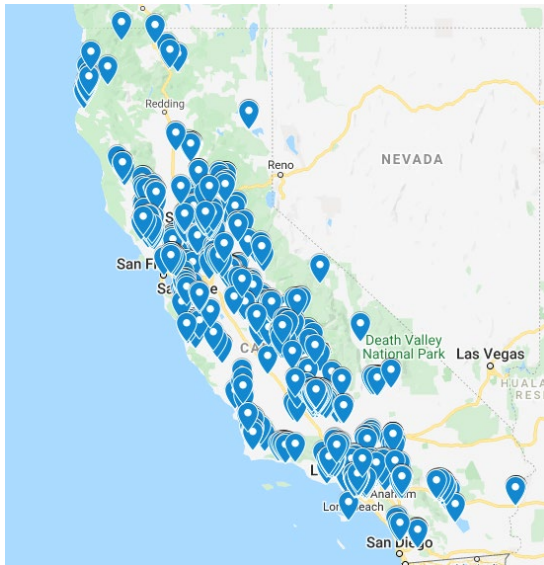


## Key learnings

- Prioritizing **communication** to all stakeholders throughout the process is key
- Students can be introduced to swabbing in a **drive-through environment** with parents nearby
- Focusing on **logistics** is crucial. **Walk-up service** may work well for older students, while **classroom service** may fit for cohorted and youngest students
- **Self-swabbing** under observation with oldest students improves throughput and logistics
- Clear guidance on obtaining **consent** and addressing **legal requirements** early is critical
- Continuous **feedback** from all stakeholders can make the program sustainable
- Objective **assessment of test results** minimizes staff confusion and improve logistics
- **Reporting and documentation** is a significant resource challenge. **Automating reporting** may save 2 FTE time

# SUCCESSFUL K-12 TESTING: CALIFORNIA SCHOOLS

A collaboration between Color and Perkin Elmer to provide access to **high-quality, fast PCR testing for public and private schools throughout California** started with a focus on testing staff and has expanded to include **students and student athletes**. The program led by the California Department of Public Health has supported statewide onboarding for all school districts and standardized a **scalable model across diverse populations**



Map of CA K-12 schools testing

**10,000+**

Schools eligible for program

**1,600+**

School staff trained

**50,000+**

K12 tests in less than 6 weeks

## Key learnings

- Standardized, state-level onboarding of over **1,000 districts** helps provide **clean, school-level data to the state** for public health planning and interventions
- Creating plug-and-play processes such as **pre-assembled testing kits significantly reduces errors** during sample collection and increases scalability
- **One-time consent and HIPAA authorization** early is critical to streamline testing processes
- **In-house staff can be trained at scale** to support sample collection and program administration when coupled with easy-to-use software and centralized support infrastructure
- **Clear funding models help improve access** for underserved populations
- In addition to capacity requirements, key pieces of successful implementation also include **coordinated onboarding, shipping and information management** between testing partners
- **Simplified logistics** and consistent, easy-to-understand processes has supported **effective use of time and resources** and increased time spent in the classroom in K-12 California schools

# SUCCESSFUL K-12 TESTING: OHIO SCHOOLS

EDUCATION

## Ohio schools for the blind, deaf pilot new COVID-19 testing program for children

**Alissa Widman Neese** The Columbus Dispatch  
Published 6:46 a.m. ET Jun. 8, 2021 | Updated 11:49 a.m. ET Jun. 8, 2021

[View Comments](#)



**Simpler COVID-19 tests at Ohio School for the Deaf**

Ohio School for the Deaf nurse Tobbi Reeves-Valentine and student Arriana York demonstrate simpler COVID-19 test. *The Columbus Dispatch*

“We might be done with COVID, but COVID isn’t done with us”

“This is quick and painless and really just reassuring”

“It’s not scary. It just feels like a tickle or a tingle... There’s nothing to worry about.”

“The good news is testing now literally takes only a minute or two out of each kid’s day”

- 4 pilot locations for ReadyCheckGo are currently underway with challenging test scenarios including the local schools for the deaf and the blind
- 35 additional schools have already signed up for the ReadyCheckGo testing program, with more to come
- Opt-in rates for testing have doubled over the summer and they anticipate maximum participation come fall
- Students have adapted to the simple process and testing has become second nature – in fact, with self-swabbing, students claim to feel more empowered



# Agenda

- The Good, the Bad and the Ugly
- School In-Person Index
  - Where did we end in the Spring
- School COVID Safety
  1. Vaccination
  2. Mitigation
  3. Confirmation
- **School Funding Options for Testing**



# School Federal Funding Options

	ELC National Testing Action Program (NTAP)	Coordination Hubs Operation: Expanded Testing (ET)	Increasing Community Access to Testing (I-CATT)	ESSER
<b>K-12 Schools Covered</b>	Public, Private & Charter	Public, Private & Charter	Public	Public & Charter
<b>Focus: Settings Covered?</b>	All K-12 Schools and Summer Programs	Underserved Populations including Schools and Congregant Settings	Underserved Schools	Broad education related issues
<b>Funding</b>	<b>\$10 billion</b> (CDC to State, large local & territories' Depts of Health)	<b>\$650 million</b> (HHS / DOD to 4 regional Coordination Hubs)	<b>\$255 million</b> (Direct service / not a reimbursement program)	Majority of funds directly to school districts
<b>Timing</b>	April 2021 – July 2022	May – November 2021	April – September 2021	Funds allocated
<b>Test Technology Choice</b>	Technology agnostic: Up to schools / districts / States	Input from HHS / DoD and schools / districts – may differ between hubs	Primarily individual PCR today	School / district decision

# Over \$10B is available to expand COVID-19 testing in schools

State	Funds available
Alabama	\$147,681,528
Alaska	\$22,033,777
American Samoa	\$1,487,904
Arizona	\$219,231,387
Arkansas	\$90,894,777
California	\$887,715,802
Colorado	\$173,450,305
Connecticut	\$107,384,696
Delaware	\$29,329,294
District of Columbia	\$21,256,814
Florida	\$646,898,907
Georgia	\$319,791,575
Guam	\$5,075,137
Hawaii	\$42,645,370
Idaho	\$53,825,522
Illinois	\$300,527,799
Indiana	\$202,771,135

State	Funds available
Iowa	\$95,029,161
Kansas	\$87,747,589
Kentucky	\$134,564,120
Louisiana	\$140,019,396
Maine	\$40,487,06
Marshall Islands	\$2,346,310
Maryland	\$182,092,917
Massachusetts	\$207,598,811
Michigan	\$330,799,236
Micronesia	\$3,084,238
Minnesota	\$169,862,951
Mississippi	\$89,640,149
Missouri	\$184,856,322
Montana	\$32,191,069
Nebraska	\$58,263,420
Nevada	\$92,772,788
New Hampshire	\$40,953,829
New Jersey	\$267,527,208

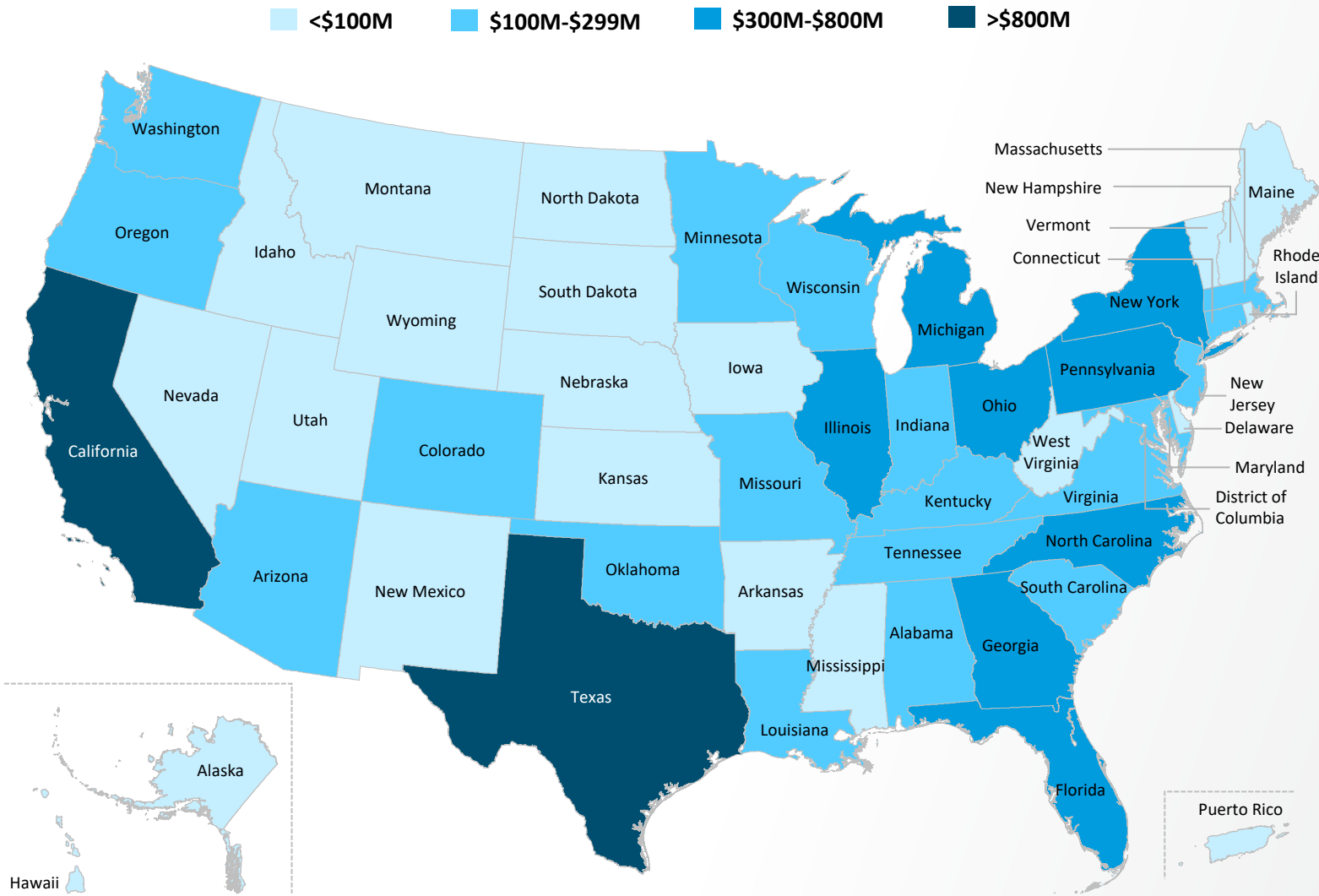
State	Funds available
New Mexico	\$63,155,461
New York	\$334,830,878
North Carolina	\$315,895,947
North Dakota	\$22,952,934
Northern Marianas	\$1,548,143
Ohio	\$352,069,960
Oklahoma	\$119,182,026
Oregon	\$127,036,170
Palau	\$653,593
Pennsylvania	\$337,878,400
Puerto Rico	\$96,192,497
Rhode Island	\$31,907,434
South Carolina	\$155,076,741
South Dakota	\$26,645,495
Tennessee	\$205,691,372
Texas	\$803,456,353

State	Funds available
Utah	\$96,561,883
Vermont	\$18,794,243
Virgin Islands	\$3,198,692
Virginia	\$257,085,647
Washington	\$229,356,843
West Virginia	\$53,978,589
Wisconsin	\$175,368,857
Wyoming	\$17,431,937
New York City	\$251,100,840
Los Angeles County	\$302,372,980
Chicago	\$81,141,236
Houston	\$69,885,356
Philadelphia	\$47,711,231

Source: Biden Administration to Invest More Than \$12 Billion to Expand COVID-19 Testing | HHS



# Distribution of \$10B Government Funding for School Testing



# 85%

To fund or provide materials (e.g., test kits, PPE, staffing, etc.) and services (e.g., sample collection, laboratory testing, etc.) to increase screening testing in all K-12 schools (public or private) within the recipient's jurisdiction

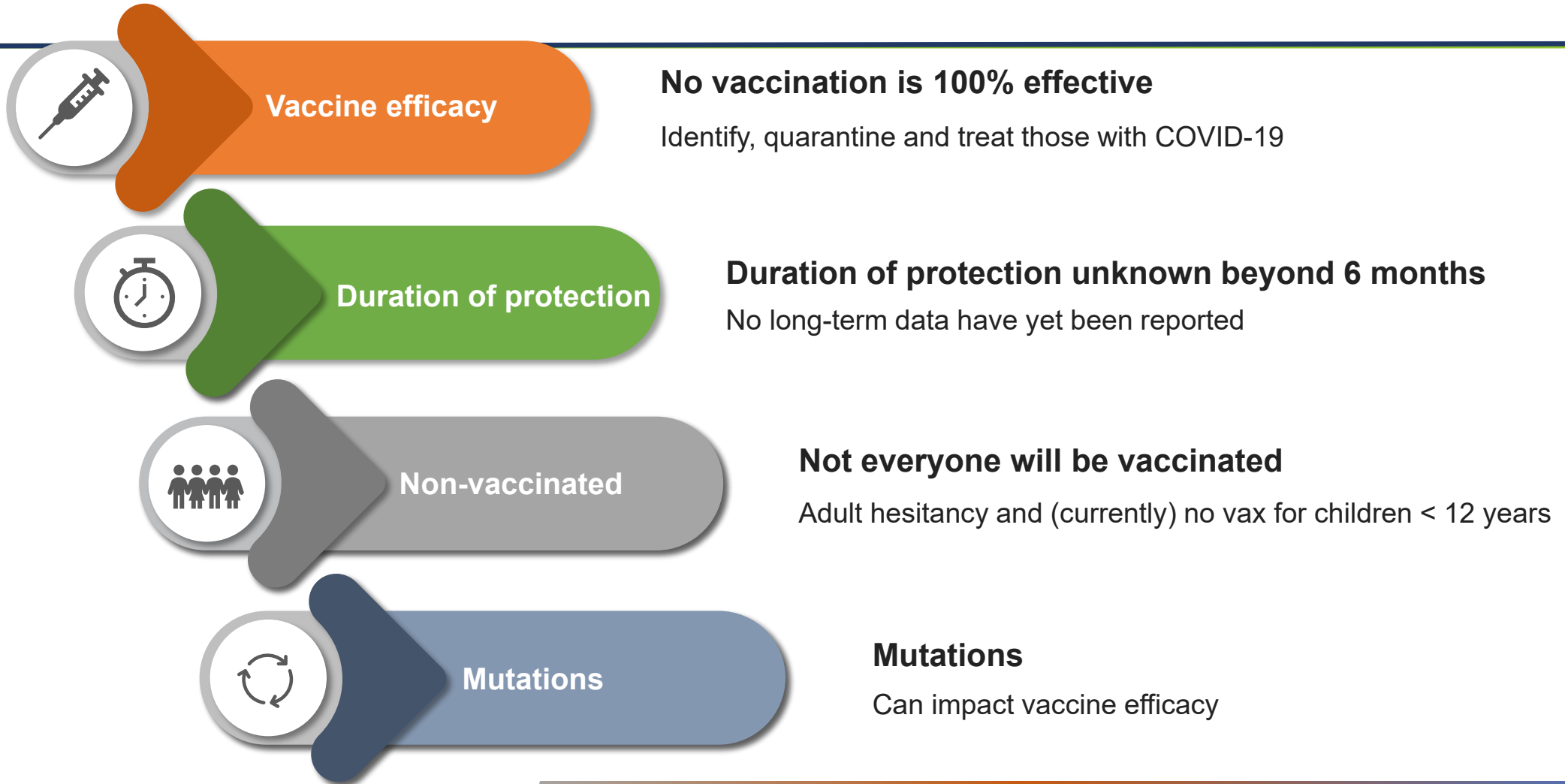
# 15%

For coordination, management, technical assistance, monitoring, and data collection and reporting activities to support K-12 screening testing programs





# Vaccines do not eliminate the need for sustained vigilance



Surveillance is essential to avoid recurrence

# Introducing



## **Karen Cormier**

*Senior Marketing Manager, Genetic Testing  
Solutions Group, Thermo Fisher*

# New Literature Available to Affiliates:



**Importance of COVID-19 Testing in Schools Template**

**Headline:** [Click here to edit this headline](#)

It's been over a year since COVID-19 began sweeping its way through the United States, putting millions out of work, shutting down businesses and closing schools. There's no doubt the pandemic has affected all Americans, but most would argue, our youth has been hit especially hard on multiple fronts – a breakdown of routine, social isolation and learning interruptions as a result of the unprecedented shift to remote learning. However, teachers, school staff and administrators worked tirelessly to reduce those effects by providing high-quality education despite the circumstances and impact on their lives. With the school year on the horizon, actions must be taken to ensure we don't repeat 2020, to how things were and keep children in the classroom.

While vaccinations continue to help put the worst of COVID-19 behind us, that does not mean that public health measures can relax yet. The critical vaccination threshold for herd immunity, 70%, has not yet been reached in the United States, which means that infected people can still spread the virus. This group of people who can become infected creates space for new variants to emerge, with increasing transmissibility and even the possibility of eluding the protection offered by current vaccines. Worse, this type of coronavirus is too new for us to know whether the protection offered by previous infection or vaccines is lifelong or requires periodic boosting.

Because of these realities, COVID-19 testing needs to remain an important public health measure, and schools are a particularly important site for testing. If schools do indeed go back to looking the way they did before the pandemic, without masks and social distancing, testing programs could be used to help keep schools open by monitoring the spread of the virus and identify those who are infected early on. We urge [click here to edit this link](#) to invest today in regular testing and stay ahead of an outbreak.

Luckily, testing in K-12 schools is supported by government funds, making it extremely affordable. As of now, [click here to edit this link](#) the [Importance of COVID-19 Testing in Schools Template](#) is available to use for school testing programs and we strongly recommend you leverage it. It's simple to use and we've included [863,789,70](#) helping kids schools, not out of them. For [click here to edit this link](#) [click here to edit this link](#), the message is clear: your commitment to allocating these funds toward COVID-19 testing in schools is essential to protecting the future of our nation, our youth, from the detrimental effects of this disease.


We appreciate your immediate attention.

**(NAME)**

**(TITLE, ADDRESS OR COMPANY NAME)**

**(CONTACT INFORMATION)**

**Why do we need COVID-19 testing in schools?**




As new coronavirus variants emerge globally, public health experts are looking at individuals who may be vulnerable to future outbreaks – children. The conceiver have his children on multiple fronts, but most would argue school closures and the disruption, turning their daily routine upside down, and changing the way the kids schools are picking up where they left off, which means kids will return to in-person variants of concern (VOCs) may end up changing this plan if infections break out. A vaccination continues to put the worst of the pandemic behind us, variants spread and whether in-person learning will be affected going forward.

There has been a lot of buzz about coronavirus infections and breakthroughs due to what is the Delta variant and how does it affect children? A variant is just a different already existent virus. As a virus is replicated, some copies contain variations from these differences result in the virus spreading easier and/or faster, creating more lengths the time of infection. A prime example of this occurring is with the Delta in India, which spreads up to 10% faster compared to other variants and now accounts for 96% of cases identified at the Children's Hospital Los Angeles (CHLA) between 2020 and April 2021 being the B.1.429/B.1.427 "California" variant – [New](#)

With new variants on the rise coupled with a mix of vaccinated and unvaccinated to schools, outbreaks among younger students may be inevitable. In the United States 12 are currently excluded from vaccination programs and only approximately 25% 15 and 37% of children ages 12-17 are fully vaccinated, making them the age group vaccination rate [3]. This low vaccination rate and congregation of kids and adult puts those who are unvaccinated at higher risk of contracting COVID-19. The strict mandates, such as wearing masks and social distancing are eliminated.

**Will School Infections Result in "Long Term" COVID?**



As COVID-19 has made its way through communities, youth have luckily been spared the disease's impact as studies show children only experience mild or no symptoms and have a rare when infected [1]. However, that doesn't mean children are spared from experiencing effects following the recovery of COVID-19. This condition, known as "long COVID", waxes and wanes, but evidence that these symptoms develop in children is now forcing researchers to look at its impact to young individuals.


"It needs to be taken seriously", noted Alok Patel, a pediatrician at Lucile Packard Children's Hospital Stanford, in a recent interview. "Even though COVID itself—the acute infection—presented less severe in children, long COVID is very debilitating, isolating and scary" [2]

The effects can range from physical symptoms, such as shortness of breath, fatigue or even palpitations, but can also present as behaviors, including trouble concentrating or lack of every day activities, potentially leading to lower-than-usual grades and decreased performance compared to their pre-COVID level.

Estimates of how common long COVID is in children vary, but the latest survey reported up children in Italy and approximately 15–20% of children in England had at least one symptom after their COVID-19 diagnosis [3]. It's unclear yet how many children in the United States are affected, but given this down to crucial because decisions on how to safely reopen schools an accurate assessment of the virus poses to children.

The best way to keep children from experiencing "long COVID" is to keep them from getting into their exposure to people who are contagious. With schools conducting in-person instruction now reduced use of masks and distancing in conjunction with kids being more likely to not when infected, schools may prove to be the location where COVID-19 has the best chance of infection. The most effective way to ensure an outbreak does not occur at schools is regular testing of students and staff. Testing in schools is supported by government funds to help school, can be less invasive and an extremely effective way to monitor the spread of COVID

**Will Schools be the next source of COVID outbreaks?**



You may have a COVID-19 prevention strategy for your school(s) that includes temperature taking and self-reporting of symptoms. Your teachers and staff are vaccinated. Kids are eager to return to full-time in-person learning. You are ready to start a "normal" school year and put this whole pandemic behind you. However, the question that continues to linger... is this enough to protect your school(s) from a COVID-19 outbreak?

**About 14 million kids under the age of 12 have tested positive for COVID. They represent nearly 14 percent of all new cases. [1]**

Based on a recent study conducted in the UK, young people are starting to test positive for the coronavirus at five times the rate of older people [2]. As Governor J. B. Pritzker of Illinois noted when interviewed on this topic, "What I'm concerned about is that we don't yet have a vaccine for kids under 12 years old, and the Delta variant seems to have been predominant among people who are unvaccinated." [3]

It takes four or more days from the date of infection to first sign of symptoms, which means those individuals can be on school grounds for almost a week unknowingly spreading the disease and can be even longer if they aren't showing symptoms. Given this, researchers are recommending steps be taken to limit the spread of the virus as waiting until a student develops symptoms and tests positive is too slow a response, even though this was the method used in many jurisdictions to prevent COVID-19 transmission [4].

Regular monitoring of everyone in a school setting may be the only way to prevent outbreaks of COVID-19 in schools, per a study published in the *Journal of Clinical Computational Biology* [5]. Proactive and comprehensive testing will help keep school districts ahead of the game by identifying those who are infected and may be asymptomatic, but are still positive for COVID-19, therefore continuing to spread to other individuals. Testing in schools is supported by government funds to help limit costs for school, is less invasive and the most effective way to monitor the prevalence of COVID-19.

**Key steps for schools to implement effective, efficient coronavirus testing programs**

**Introduction**

The COVID-19 pandemic has impacted every school in the nation. Students have adjusted to new modes of distance learning, parents have balanced remote work with their children at home schooling, and teachers have pivoted to virtual instruction facing countless challenges. As the pandemic has drawn on, school administrators have been faced with complex decisions about how to safely transition back to in-person learning. While vaccination of teachers and staff plays an important role in enabling safe in-person education, the role of testing remains critical, especially given that most K-12 students continue to be ineligible for vaccination.

Introducing systematic coronavirus testing can enable schools to identify positive cases and protect students, teachers, and staff against the spread of the virus. If planned and managed effectively with the right partners, testing programs can be easy to implement, scalable, and cost-efficient. With well-established testing protocols and diligent planning and communication, schools can provide in-person learning opportunities for students—increasing confidence in re-opening among teachers and parents.

**COVID funding availability**

With funding from the American Rescue Plan Act, the Centers for Disease Control and Prevention (CDC) is awarding \$10 billion to states to support coronavirus testing in K-12 schools for students, teachers, and staff through July 2022 [6]. This funding creates an immense opportunity for state and school district leaders to institute testing programs that can benefit students, teachers, and our communities at large.

**School testing program design**

In order to take advantage of the present opportunity and best use testing to enable a safe return to in-person learning, schools need to thoughtfully design a streamlined and cost-efficient testing program. The Rockefeller Foundation's National Testing Action Plan (NTAP), created in conjunction with the nation's leading testing experts, provides a detailed framework to help schools design testing programs [5]. By leveraging the NTAP recommendations, which are informed by the experiences of schools that have already established successful testing programs, school administrators can avoid creating a testing strategy from scratch and have clear criteria to identify the right partners to design highly efficient, low-cost, and easily scalable testing programs.

**Testing modality**

NTAP recommends that schools implement routine weekly testing for all students, teachers, and staff using "pooled" PCR tests—an approach that involves combining multiple individual samples together into one single test in order to make testing more affordable. This streamlined method involves four simple steps:

- In-school sample collection**—Trained school staff oversee sample collection from individuals in an assigned pool. Staff can quickly complete the sample collection process, helping to reduce disruption in the classroom.
- Pooling swabs into a tube**—School staff place swabs collected from individuals into one tube for each pool, thus creating a pooled sample.

**Coronavirus Testing Program—FAQs for administrators**



**Q: How do I create and implement a coronavirus testing program for my school?**

A: We provide schools with short manual guides that make it easy and more comfortable for students to collect their own samples. With our supervision, students will be able to quickly swab their own noses and place their swabs in a test tube. Teachers and staff can then easily place the tubes into provided shipping packaging, and arrange for the packages to be picked up for transport to labs, where the samples will be tested. Test results are ready within 12-48 hours of sample collection. Schools can choose whether they would like teachers, school staff, and families to receive results via text or email—or if the school would like to manage communication of test results on their own.

**Q: What type of coronavirus test will we use?**

A: PCR testing technology, which is considered the "gold standard" and most accurate type of test by COVID-19 testing experts.

**Q: Do teachers and school staff need to teach students' swabs?**

A: No. Teachers and staff should not be in touch students' swabs. Students place their swabs into the provided collection tubes, teachers and staff only open and close the tubes. If students need additional assistance, we provide instructional how-to videos and flow to collect your sample papers.

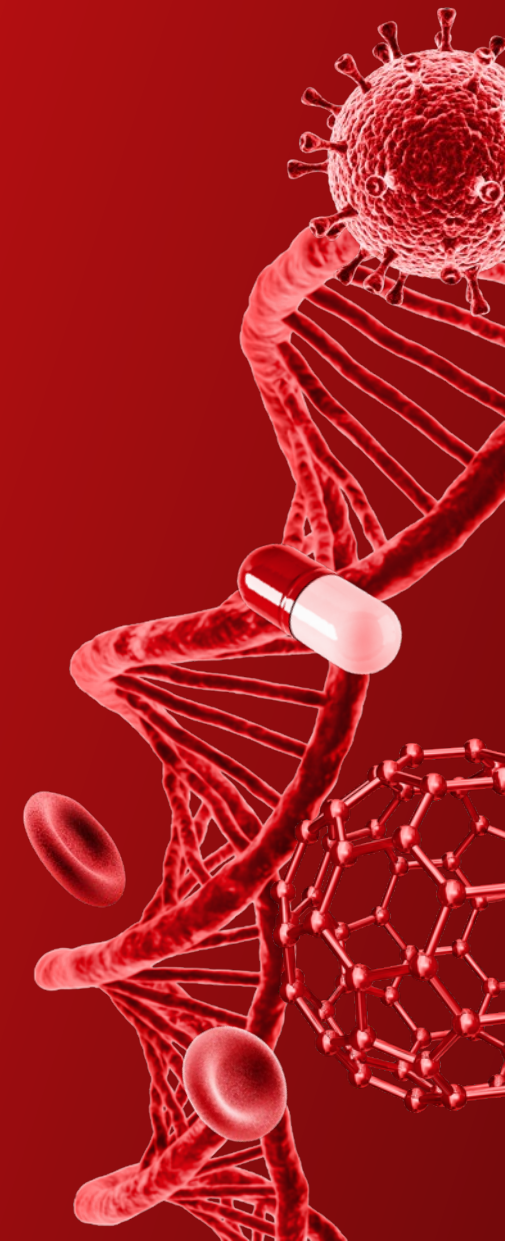
## Letter Template Importance of Testing

## 3 Educational Articles Importance of Testing

## NTAP Summary

## FAQs for School Administrators

# Questions



# Thank you

