K-12 NATIONAL TESTING ACTION PROGRAM (NTAP)

Connecting schools with the nation's leading testing companies to safely reopen

The ROCKEFELLER FOUNDATION

HEALTH CATALYSTS GROUP

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CONTEXT

The K-12 National Testing Action Program (NTAP) is a plan to provide free Covid-19 testing for K-12 public schools to enable safe in-person learning

Situation

- Due to Covid-19, a majority of US K-12 public schools are operating remotely or in hybrid learning
- Online learning is not an adequate replacement for in-person school and is creating large education and socialization gaps

Complication

- Teachers, students and communities may fear the spread of Covid-19 in schools
- Schools are not fully equipped to provide necessary mitigation measures including testing
- While testing capacity exists, labs do not have a clear signal on how to make capacity readily available to schools
- The value of testing is getting lost amid the focus on vaccination

Question

- How do we safely and sustainably re-open the nation's K-12 public schools as quickly as possible?
- How do we make testing free, easy and widely available for schools?

Answer

1. ***Implementation of full safety and mitigation activities***
2. ***Prioritized vaccination for teachers and staff***
3. ***Weekly testing for students, teachers and staff***

K-12 NATIONAL TESTING ACTION PROGRAM (NTAP) SUMMARY (1 OF 2)

The school changes stemming from the Covid-19 pandemic have significant impacts:

- Student learning, as well as mental and physical health, particularly for underserved populations
- Parent economic security, particularly for women
- Teacher well-being, including where they focus their money, time, and mental health
- The national economy, including billions of dollars of projected losses

K-12 testing programs can help reopen schools:

- Testing programs work to quickly identify positive cases for isolation, keeping school infection rates well below their local community. Schools are the safest place for kids and adults and are safer than the grocery store
- Logistics are feasible for public schools, both large and small. Testing protocols become second nature within weeks
- Testing dramatically increases confidence in re-opening for teachers and parents. We have seen confidence grow from about 20% to over 80%
- Federal actions provide funding & demonstrate the importance of testing as the "missing link" to re-open schools and get all students back for in-person learning

Re-opening schools safely this spring requires:

1. Safety and mitigation measures (masking, distancing, cohorting, etc.)
2. Teacher and staff vaccination
3. Regular and reliable testing of students and adults

K-12 NATIONAL TESTING ACTION PROGRAM (NTAP) SUMMARY (2 OF 2)

Testing protocols are critical to program success:

- Step 1 - PCR 'pod pooling' or antigen tests with either anterior nasal swabs or saliva
  - Screening testing frequency is often once per week for students and up to twice per week for teachers and staff
- Step 2 - Follow-up diagnostic PCR or rapid antigen testing for individuals in positive pools
- Optional but recommended Step 0 - Test all participants as program begins

NTAP implementation and logistics requires diligent planning and partnership:

- Labs provide lab testing and logistics (including information systems) to schools and parents
  - Capacity for schools must be guaranteed and must not be reduced
  - School testing capacity must not reduce testing capacity or increase Turn Around Time for the general public
- All results must be returned to schools and test takers in 24 hours or fewer
- Costs for tests and additional test-related costs at each school are reimbursed by the state from their allocation of the $10 billion federal allocation of the American Rescue Plan Act for school testing

K-12 NTAP compilation team includes:

- Representatives from the nation's largest labs and test manufacturers with deep experience in Covid-19 testing for schools
- Representatives from the world's largest lab supply manufacturers with deep experience in manufacturing and distribution
- Representatives from information service providers
- In addition, the team met with school superintendents, principals, teachers and parents to inform the plan

ACKNOWLEDGEMENTS

INTRODUCTION AND CURRENT K-12 LANDSCAPE

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IMPACT OF SCHOOL CHANGES ON STUDENTS

Impact on learning:

- **25% decrease** in **post-educational learning potential** among ninth graders in poorest communities
- Returning students expected to have only **63-68% and 37-50% annual learning gains** in reading and math respectively

Food insecurity and mental health:

- **169.6M** school meals missed weekly impacting **student nutrition** & **food security**
- **24%** increase in **emergency department visits related to mental health** for **children aged 5-11** and **31%** increase among **adolescents aged 12-17**

Minority Populations

In Washington D.C., the number of **Black and Latino children who met literacy benchmarks dropped by 12-14%** compared to white students, whose numbers dropped by 6%

Black and Latino students could experience **learning losses equivalent to 9-10 months** as a result of the pandemic

Sources: Washington Post , New York Times ,Yale, AERA, AJPH, CDC, The Atlantic, USDA, CDC, NYT

IMPACT OF SCHOOL CHANGES ON PARENTS

70% of working parents
do not have access to regular caregivers, and their return to work is dependent on in-person schooling for their children

4 in 10 parents
say they have less job security due to the pandemic and fear being penalized because they have childcare responsibilities

4x more women
compared to men left the workforce as the new school year began due to students at home

Sources: Brookings, Catalyst, NPR

IMPACT OF SCHOOL CHANGES ON TEACHERS

3 in 4 teachers

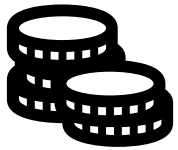
are working more hours during Covid-19 than before; of these, nearly **one in 5** were working more than 15 hours more per week during Covid-19

3 in 4 teachers

report their school or district does not provide adequate access to counselors and mental health support for both students and teachers

9 in 10 teachers

felt their expertise was not appropriately tapped by decision-makers in the transition to distance and hybrid learning; nearly half of these expert teachers said their expertise was not tapped at all



1 in 3 teachers

report spending more out-of-pocket money teaching under Covid-19 than before; one-quarter are spending more than $500 more than before

Source: National Board for Professional Teaching Standards

IMPACT OF SCHOOL CHANGES ON ECONOMY

$2.5 trillion

estimated cost to the U.S. in future earnings of four months of lost education – equivalent to 12.7% annual GDP

$350 billion

of lost revenue and growth could be reversed with the opening of schools, according to some estimates

13.8 million

Years of Life Lost (YLL) may be associated with the school closures during the Covid-19 pandemic

$64.5 billion per year

in lost wages and economic activity from women leaving the labor force and/or reducing working hours to assume caretaking responsibilities

Source: Brookings, USA Today, JAMA, Center for American Progress

SUCCESSFUL PROGRAMS:
TESTING WORKS TO KEEP SCHOOLS SAFER

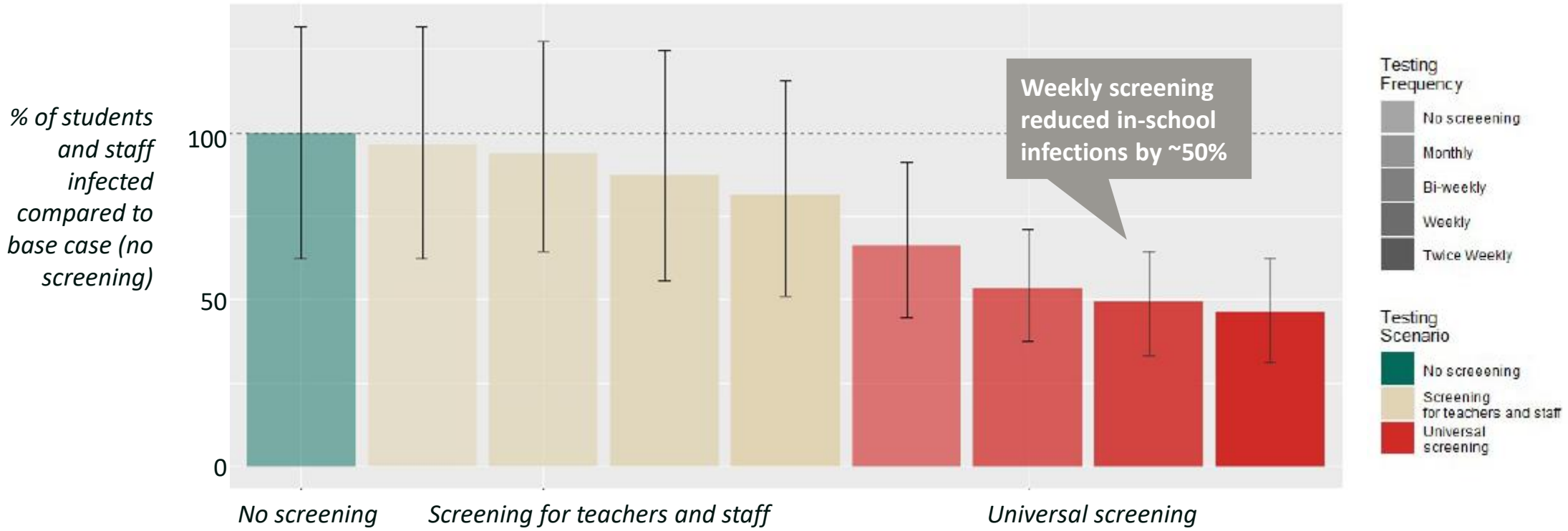
The ROCKEFELLER FOUNDATION

HEALTH CATALYSTS GROUP

REGULAR TESTING IN SCHOOLS CAN REDUCE INFECTION

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

Cumulative COVID-19 infections among students and staff in high schools



Source: Mathematica

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

Source: New York State Dashboard, NYC Dept. of Education Testing Report, USA Today, CDC

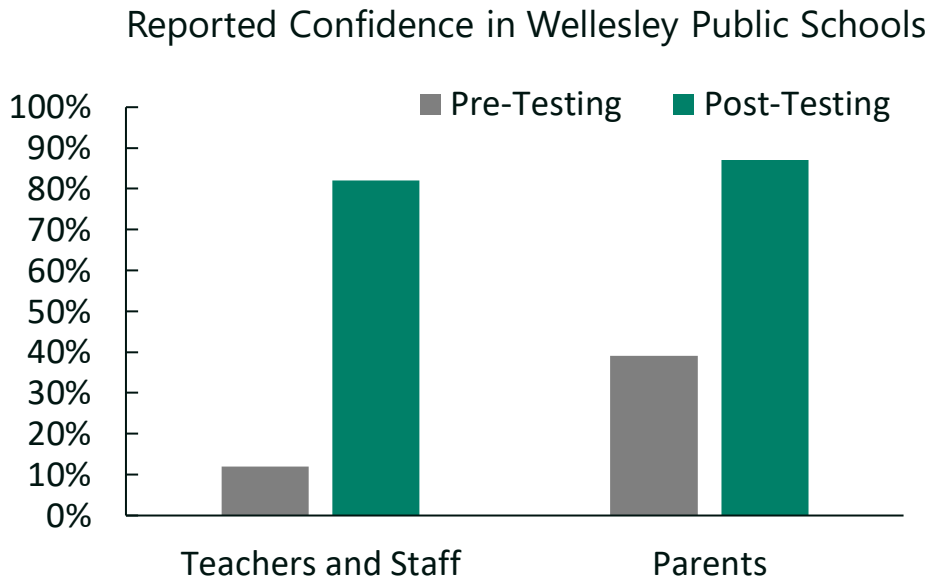
TESTING BRINGS STUDENT, PARENT AND TEACHER CONFIDENCE

"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

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



Source: WBUR, WPS Viral Testing Information, Covid-19 Testing in K-12 Brochure, UnitedHealth Group

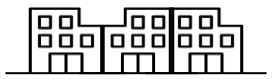
SUCCESSFUL K-12 TESTING: MASSACHUSETTS SCHOOLS (1 OF 2)

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:

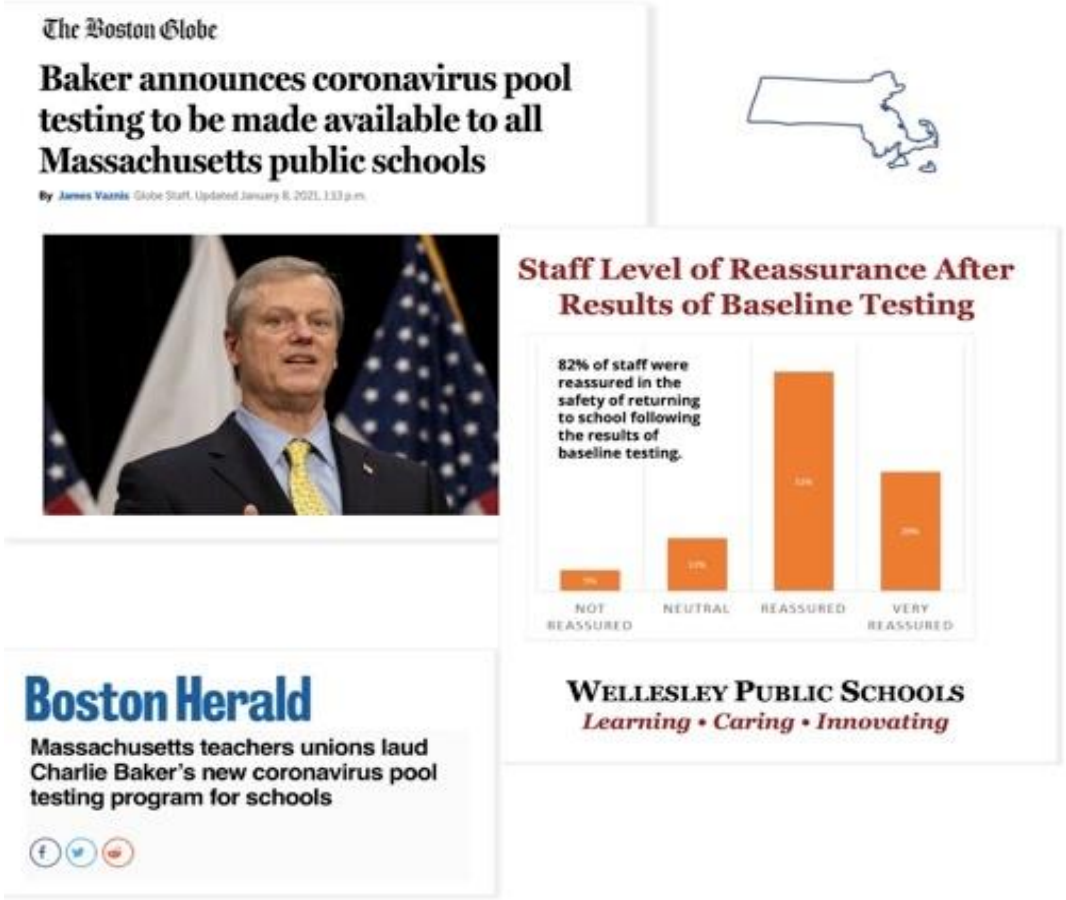
154
school districts have rolled out testing



940 or 50%
of public schools participating

~13,000 tests
in first week of testing

THE **Massachusetts Program**



Sources: Boston Globe, Boston Herald, WPS Viral Testing Information, Mass. DoE

SUCCESSFUL K-12 TESTING: MASSACHUSETTS SCHOOLS (2 OF 2)

Pooled testing in Massachusetts, a collaborative effort between the Massachusetts Department of Public Health and the Department of Elementary and Secondary Education with implementation support from the Shah Family Foundation, is the **first statewide pooled testing effort to offer weekly testing to *all* students, teachers and staff in public schools**. The program launched in January and schools are already testing students

Pooled testing offering:

- The tests are front-end or on-site pooling of swabs where roughly 10 swabs are put into one tube and sent to the lab for **less than $5/swab**
- **Rapid antigen tests are provided free to schools** to do follow-up tests of positive pools
- Vendors also provide individual PCR tests for **follow-up testing for $26.50-$85**
- The **state is paying for the first phase of the program through March 28** for any interested district. To continue programs, districts may use other federal funds

Operationalizing school testing:

- Most schools are **administering the program themselves** using nurses and other school staff to administer program and observe tests
- Some **larger school districts are contracting** with ambulance companies or bringing in nursing students to help with program administration

Key partners:

Massachusetts Department of Elementary and Secondary Education — Program design and outreach

Shah Family Foundation — Implementation support

Commonwealth of Massachusetts Department of Public Health — Public health guidance

Key learnings

- More districts, including more urban districts, are **returning to in-person learning with testing**
- Early data indicate that **positivity rates in schools are lower than community rates**
- Pooled testing is more **doable & manageable** than some might realize – it is very possible to implement the initiative within all kinds of districts
- It's essential for the state to establish critical components of this initiative – including **funding, a state contract list, and regulatory** enablement – but **districts need to have the ability to adapt** the model to reflect the strengths & challenges of local contexts
- It's very important to **aggregate resources**, examples and tools to streamline the process for everyone (e.g., common consent form in multiple languages, Covid Ed Testing website)
- High quality **parent engagement** is crucial
- It is vital to have **good vendor and inter-governmental partners**

Sources: Boston Globe, Mass. DoE, Mass DoE memo, Covid Ed Testing

SUCCESSFUL K-12 TESTING: NYC PUBLIC SCHOOLS

In September, BioReference embarked on a journey in collaboration with **New York City Health and Hospitals** to **bring school back** and help keep teachers and students safe **throughout the school year**

64 BioReference teams in the field

200 Schools per day

1200 Total schools

TAT **<38 hours**

209,790 students and staff tested to date

.47% positivity

1 Order → 2 Collect → 3 Transport → 4 Accession → 5 Test → 6 Report

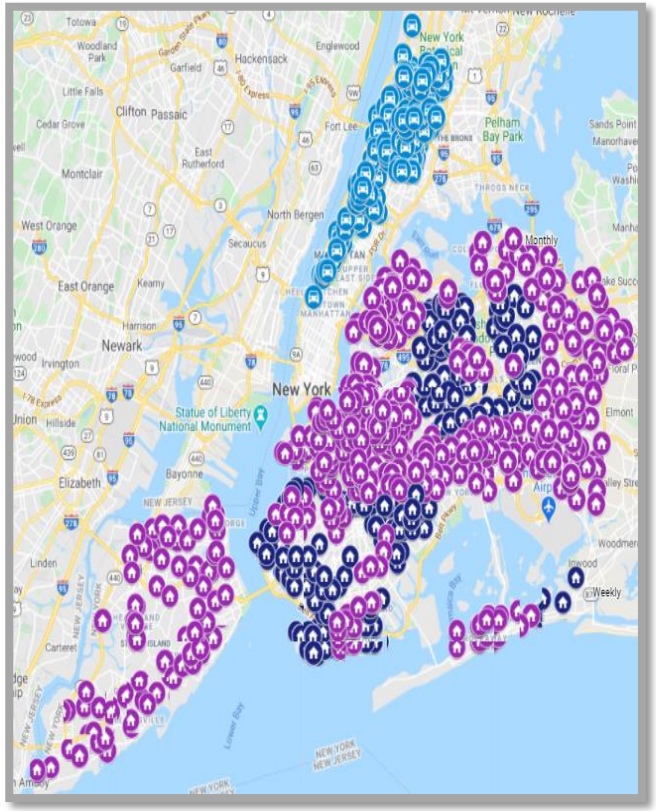
-Turn-key operation that includes a pre-accessioning process, onboarding, training, scheduling, consent, collection and timely TAT

-PCR lab-based testing

-Multiple daily communications with city and school command center

-Minimal disruptions in schools including normalizing testing for younger students

-Daily analytics of results

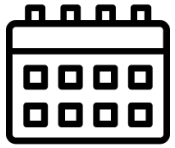


Sources: BioReference

SUCCESSFUL K-12 TESTING: DISTRICT OF COLUMBIA SCHOOLS

Current status:

All students and staff tested weekly



Over 605 samples from students and staff tested each event

7.3 people in the average pool

2 positive pools (1 faculty, 1 kindergarten) to date

WASHINGTON INTERNATIONAL SCHOOL

UNITEDHEALTH GROUP

Key learnings

- **Pooling in a pod is the most cost-effective** and sustainable method for testing
- Staff and older students can **self-swab**
- **Transparent communication** to parents, staff and students about importance of testing (in multiple languages) is critical
- Pooling-specific, cloud-based **information management** system should be used to effectively **track data**
- Clear **standard operating procedures** and setting up a governance structure is critical for success
- A **list of FAQs** should be created and updated as necessary to address staff and family concerns

Sources: UnitedHealth Group

SUCCESSFUL K-12 TESTING: BALTIMORE CITY SCHOOLS

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

CBS Baltimore

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

FOX 5 NEWS

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

by Rachel Aragon | Monday, March 1st 2021

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

Sources: Concentric by Ginkgo, CBS Baltimore, Fox 5 News

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

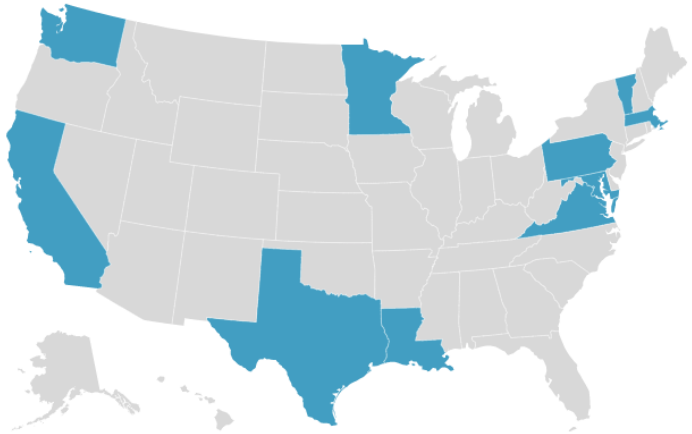
- Prioritizing **communication** to all stakeholders throughout the process is key
- Students can be introduced to swabbing in a **drive-through environment** with parents nearby
- Focusing on **logistics** is crucial. **Walk-up service** may work well for older students, while **classroom service** 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

Sources: NCES, Delaware Health and Social Services

SUCCESSFUL K-12 TESTING: NATIONWIDE PILOT WITH PCR POOLING

Current status of Concentric by Gingko's pilot of **pooled testing** in over 130 schools across 11 states:

- **<15 minutes** to run a full-classroom collection
- **1000+** classrooms tested
- **10,000+** students and educators tested
- **32** positive individuals identified and isolated to reduce transmission



Kids feel empowered to self-swab, help their community, and teach others

> Swabs go **"Boogers down".**
>
> YORK ACADEMY

> You only have to go up to **the squishy part of your nose**.
>
> PARK STREET SCHOOL

> We have a jingle - **"1, 2, 3, 4 - switch it over, do 4 more"**
>
> SHARON PUBLIC SCHOOLS

> It's a **free chance to pick your nose**, and no one is going to yell at you.
>
> SHARON PUBLIC SCHOOLS

Key learnings

- Clear communication increases confidence among students, parents, teachers and administrators
- Streamlined and human-readable consent forms are vital for ensuring parent buy-in
- Build infrastructure (including registration portals) that can scale
- Streamlining school onboarding virtually (via a website and videos) enables rapid scale
- Minimized disruption to classroom is needed for adoption (<15 minutes and self-collection)
- Pod-pooling approach can work in a wide range of schools (multiple states, low-income areas, minority communities, etc.)

Sources: Concentric by Gingko

SUCCESSFUL K-12 TESTING: CROSS-CITY LEARNING GROUP PILOT SITES

The Cross-City Learning Group was formed through The Rockefeller Foundation's partnerships with HHS, Duke-Margolis Center for Health Policy, Johns Hopkins University, Mathematica and **six cities/states willing to pilot testing programs**

Washington D.C.

8
learning hubs

Rhode Island

78
schools and learning education agencies

New Orleans

45
schools

Tulsa

70
schools

Louisville

12
regional testing sites

Los Angeles

60
Parks and Recreation centers

Key learnings

- Engaging early with district administrators and local partners can help gain their buy-in and support for identifying resources
- Clear communications, delivered by trusted leaders in the community, are needed to build community members' understanding of the program and encourage participation
- The testing approach should be designed using both evidence-based guidance and on-the-ground knowledge of what will be acceptable to students, parents, teachers and staff

Source: The Rockefeller Foundation, Mathematica

K-12 NATIONAL TESTING ACTION PROGRAM: OVERVIEW

The ROCKEFELLER FOUNDATION

HEALTH CATALYSTS GROUP

WHAT IS THE VISION: K-12 NATIONAL TESTING ACTION PROGRAM

Testing is the missing link to K-12 schools reopening safely in-person this spring

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Thus, the K-12 National Testing Action Program focuses on:

A. **Free and easy testing** for schools, kids and parents

B. No reduction of **testing availability** anywhere in the country

C. Public and private **resources mobilized** and coordinated for sustainable capacity

D. A maximum **24-hour turnaround time** for results

E. **Simple procurement, funding and implementation** processes, including results reporting

F. Including the ability to **adapt and improve**, keeping pace with scientific advances

HOW DOES IT WORK: NATIONAL, REGIONAL AND LOCAL COLLABORATION

The K-12 National Testing Action Program is designed to be **federally guided, state/regionally coordinated, and locally implemented**, all with the aim to **support the safe reopening of 100% of K-12 schools**

Role	Responsible party
Program goals & strategies	
Program coordination	
Program implementation	

K-12 NTAP will provide enough support to test:

- 100% of willing students weekly (per appropriate consent/assent)
- 100% of willing teachers and all staff up to twice weekly

"Everything should be made as simple as possible but no simpler" – Albert Einstein

KEY REQUIREMENTS FOR SUCCESSFUL K-12 TESTING

Key requirements for successful testing programs

Easy

Testing an entire classroom should take minimal time (e.g., ~12 minutes). Testing must be easy for students as young as kindergarten to do. Logistics should be streamlined and should not burden school staff

Effective

Testing should be accurate and give school communities data that provides them with confidence to maintain in-person learning

Accessible

Testing should be easy to access for every school and should be easily scalable to cover entire school districts

Affordable

The cost of testing should allow for every student to be tested every week. Federal funding may be leveraged to cover costs

HOW TO CHOOSE A TEST: STEPS IN THE TESTING PROTOCOL

A strong testing protocol consists of three steps:

Step 0

Initiation testing
(optional, if possible)
When program begins – especially for schools in high prevalence areas – all students, teachers and staff should be tested individually or in small pods before regular weekly testing begins*

Step 1

Asymptomatic screening

High-quality 'pod-pooled' PCR tests or antigen tests administered weekly to students and twice-weekly to teachers and staff

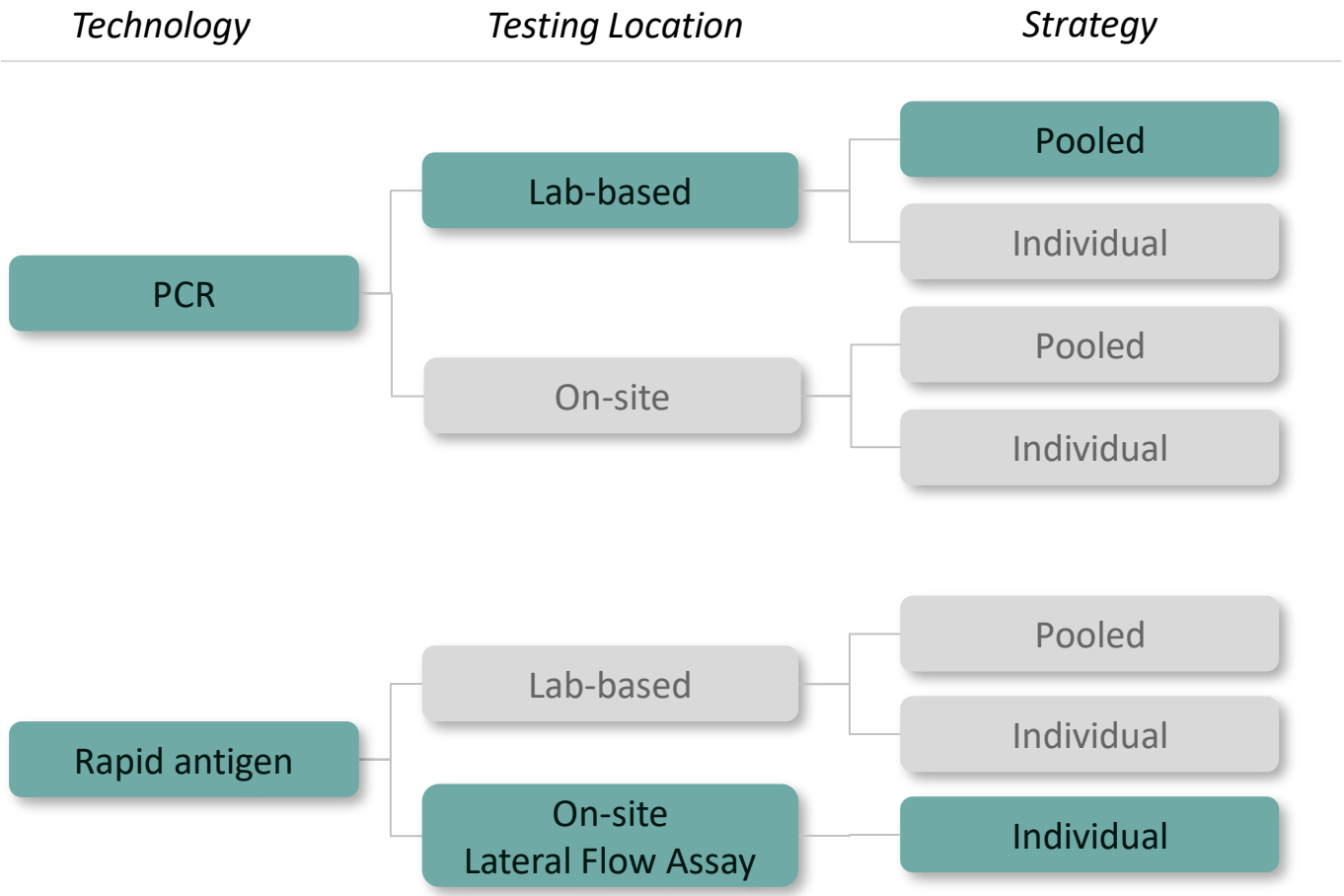
Step 2

Positive pool follow-up testing as required

For individuals in positive pools, provide individual PCR or antigen diagnostic tests – via at-home, on-site, clinic, lab or pharmacy testing

*While Step 0 is not discussed in further detail here, it is possible to leverage similar testing strategies to those described for steps 1 and 2. The purpose to Step) is to identify infected individuals before regular testing begins, which will make it easier to identify new cases moving forward

HOW TO CHOOSE A TEST: ASYMPTOMATIC SCREENING OPTIONS (STEP 1)



Multiple testing technologies and systems will be needed to collectively meet school demand and diversify the supply chain. Common types of testing include:

Pooled PCR testing is recommended as the preferred option for routine screening testing. Samples are collected at the school and sent to a lab for processing. Data management handled by test provider

Individual rapid antigen testing is recommended for routine asymptomatic testing of parts of a population or for diagnostic testing. Samples are collected at the school and tested on-site. Data management is handled by provider, in-state or vendor-provided portals. Individual testing for screening can be advantageous if the number of cases is high in a school

HOW TO CHOOSE A TEST: FOLLOW-UP TESTING OPTIONS (STEP 2)

Step 2 testing options:

Follow-up test:
- Follow up with school's test provider to deconvolute PCR pool directly with pre-existing or new nasal swab or saliva sample
- Rapid antigen test

Pre-paid coupon: Can be redeemed at a local retail pharmacy, clinic, testing lab or hospital to obtain proof of negative result to return to school

At-home kit: Can be used to self-collect a nasal swab or saliva sample and ship it back to a lab for testing. A pre-paid shipping label will be provided

Other sources: Collaboration with local Public Health Lab or university or other community labs may be used to get a confirmatory test using a pre-paid coupon

Benefits of the K-12 NTAP program

- ✓ Provides schools and families the **flexibility** to choose the right test option and location for them
- ✓ Improves **equity and access to confirmatory testing**
- ✓ Quickly allows students to get the confirmatory results required to return to school
- ✓ Optimizes use of **local testing resources** based on availability and preference
- ✓ **No cost to families or schools**

PCR POOLING: THE EVOLUTION OF PCR TESTING

The path from individual to pooled testing: what we've learned

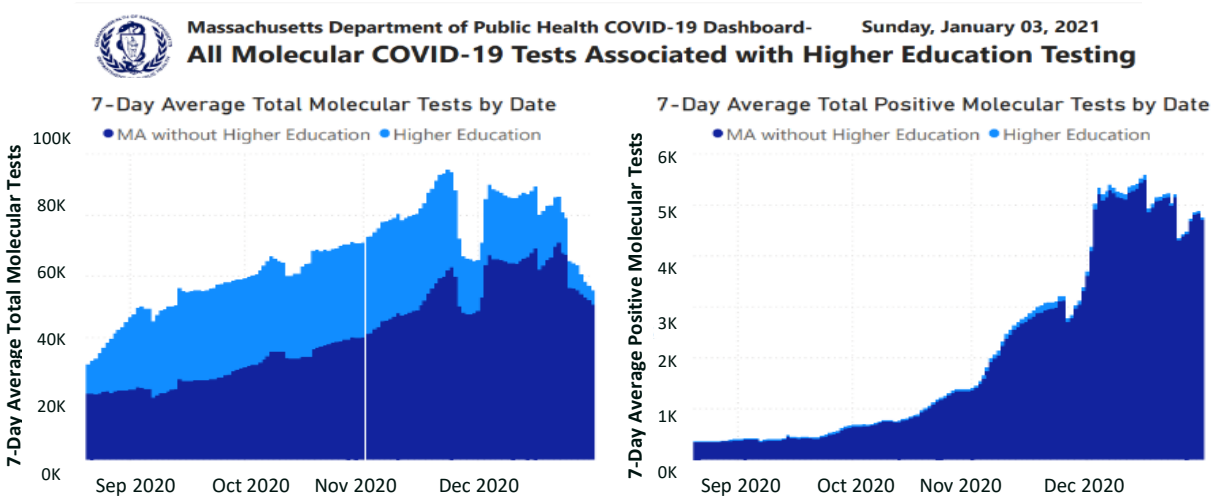
Colleges and universities demonstrate effectiveness of testing, infection control, and isolation measures by creating sub-communities with lower Covid-19 prevalence and test positivity rates than the surrounding communities

Tufts University implemented a **regimented individual PCR testing strategy** in partnership with the Broad Institute to obtain community prevalence data across campus sites in multiple municipalities

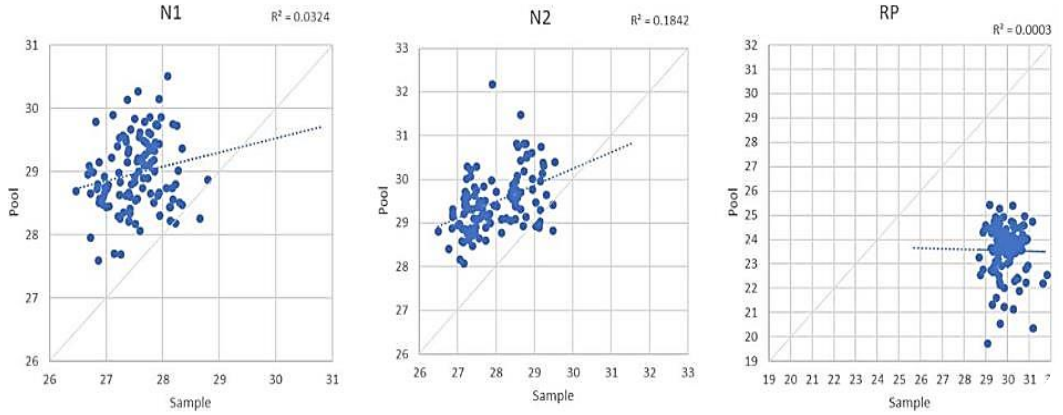
High costs limit the accessibility of repeated individual PCR testing for K-12 communities

Tufts University designed a **study of pooled testing to evaluate the specificity and sensitivity** of a pooled assay, which provides great confidence in identifying all positive individuals using pooling. Pooling becomes more popular in K-12 schools

While sample dilution was an upfront concern for pooling, as it could result in false negatives, pilot results from 1576 individuals (students, staff, faculty, etc.) **showed 100% congruence between pooled and individual results, no false negative results, and slightly elevated CT-values**



Data Sources: COVID-19 Data provided by the Bureau of Infectious Disease and Laboratory Sciences; Tables & Figures created by the Office of Population Health. Note: All data are current as of 11:59 PM on 1/2/21. Due to lag in reporting by labs, counts for most recent dates are likely to be incomplete. This includes individuals who have had more than one molecular test



Ct results comparing pool Cts (y-axis) with the Ct value of the corresponding single positive sample (x-axis). Each graph represents a different probe; N1 and N2 detect regions of SARS-CoV-2 virus RNA while RP represents host genetic material abundance. Blue line: trendline of data; grey line: y=x bisector.

Source: Massachusetts Dept. of Public Health Covid-19 Dashboard of Public Health Indicators, Pooling for SARS-CoV2 Surveillance: Validation & Strategy for Implementation in K-12 Schools

PCR POOLING: HOW IT WORKS

Classroom pooling

All students and teachers in a pod **swab their noses** with short swabs (think: cotton swabs). Swabs are placed in one tube (this is the "pooling" step). This pool is then run as a single test at a local lab.

Key benefit: **groups of 25 people can be tested using one test**. For a school of 500, only 20 tubes must be collected and managed, instead of 500 when testing individually.

Only positive pools result in further action. Next steps are decided by the school.

STEP 1 - **Pods self-swab**

Individuals in a pod (e.g., classroom) self-swab and place swabs into a single tube. Takes minutes to complete for an entire pod

STEP 2 - **Test the pools**

Each tube is then run using one test at a local lab, and the classroom is provided with one result

STEP 3 - **Get results**

Results can be used by schools to make more informed decisions, detect the virus earlier, and mitigate spread

PCR POOLING: TESTING OPTIONS FOLLOWING A POSITIVE POOL

What happens if there's a positive pool?

The solution will look a little different for each school based on unique circumstances. However, K-12 NTAP recommends all follow-up testing be fully funded to ensure equitable access

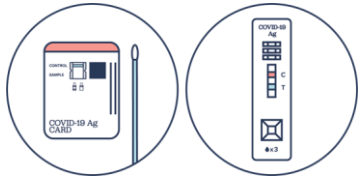
Approaches for follow-up testing:

School-based testing (preferred option)

Government-funded rapid antigen tests or on-site collection for lab-based nasal or saliva tests administered at school

At-home testing

Government-funded self-collected nasal or saliva sample sent to labs for testing using pre-paid shipping



Pre-paid coupon

Government-funded coupon redeemable at local pharmacies, clinics, testing labs or hospitals to obtain proof of negative result to return to school

Community-based testing

Government-funded tests administered at pharmacies, clinics, doctor's offices, community centers or other publicly accessible sites

PCR POOLING: SENSITIVITY

Studies comparing the sensitivity of pooled versus individual tests confirm that **PCR pooling is more than sufficient** for asymptomatic screening tests and has **similar sensitivity to individual testing**

BROAD INSTITUTE

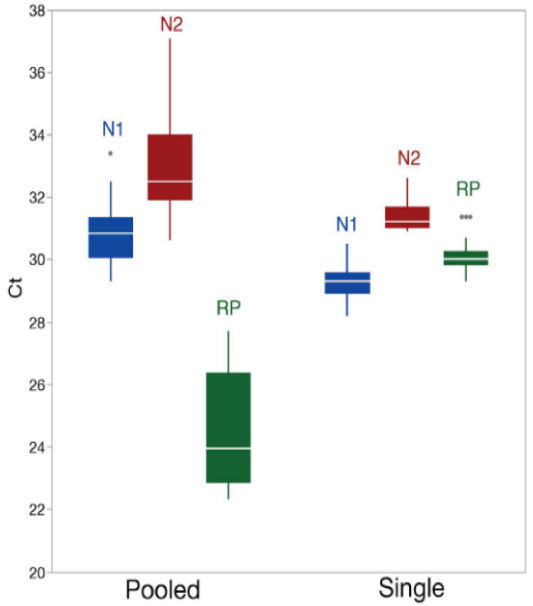
A study conducted by *The Broad Institute* found comparable levels of detection when samples are pooled or individually tested

Results show that the sensitivity was comparable for pooled and individual/single samples

Notes on the graph:

- *10 samples* were pooled together to compare sensitivity ***N1 and N2*** samples look for Covid-19 virus genome and ***RP*** samples look for human genome (control)
- A lower Ct value means a higher amount of virus genome is present
- The RP Ct is significantly lower in the pool as expected since human genomic material is present on both positive and negative swabs

Pooled vs individual testing sensitivity



UNITEDHEALTH GROUP

A study by the *UnitedHealth Group* showed pooled testing had comparable performance to individual PCR testing

Results show that up to 15 samples could be pooled together to reduce costs and supplies while maintaining accuracy of results

Sources: Pooling for SARS-CoV2 Surveillance: Validation and Strategy for Implementation in K-12 Schools, Bethany L Hyde, Ethan Berke, Prat Verma

RAPID ANTIGEN: HOW IT WORKS

Rapid antigen testing

Students and teachers have their noses swabbed with short swabs. Each swab is applied to a test card or cassette and allowed to run for the appropriate amount of time.

Each person tested has their own test. For a school of 500, a total of 500 tests are needed to test everyone.

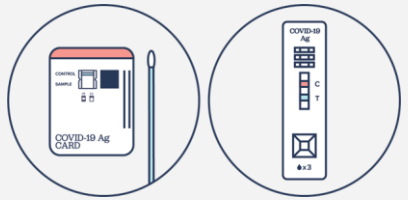
Once the necessary time has elapsed, **trained staff interpret and record each result**. Positive results are communicated to the individuals and families.

STEP 1 - **Individuals swabbed**

Individuals are swabbed either by a trained staff member or a healthcare professional

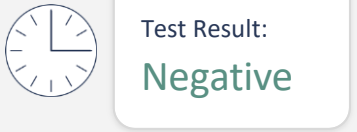
STEP 2 - **Test each swab**

Each swab is applied to a test card or cassette by a trained staff member or healthcare professional



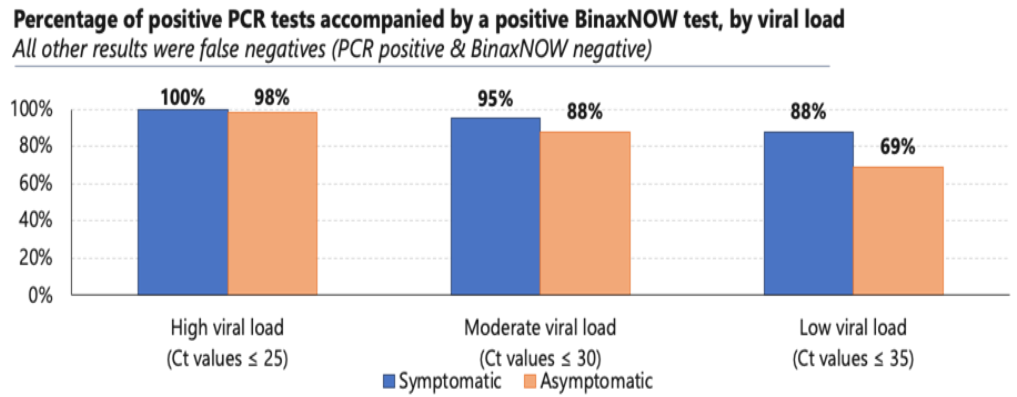
STEP 3 - **Get results**

Results are interpreted and recorded by a trained staff member or healthcare professional. They can be used to make more informed decisions, detect the virus, and mitigate spread



RAPID ANTIGEN: USE FOR POOL DECONVOLUTION

Given the speed, accuracy, price and widespread availability, some schools are using **rapid antigen testing as a way for recommended follow-up testing** to support the pooled test program

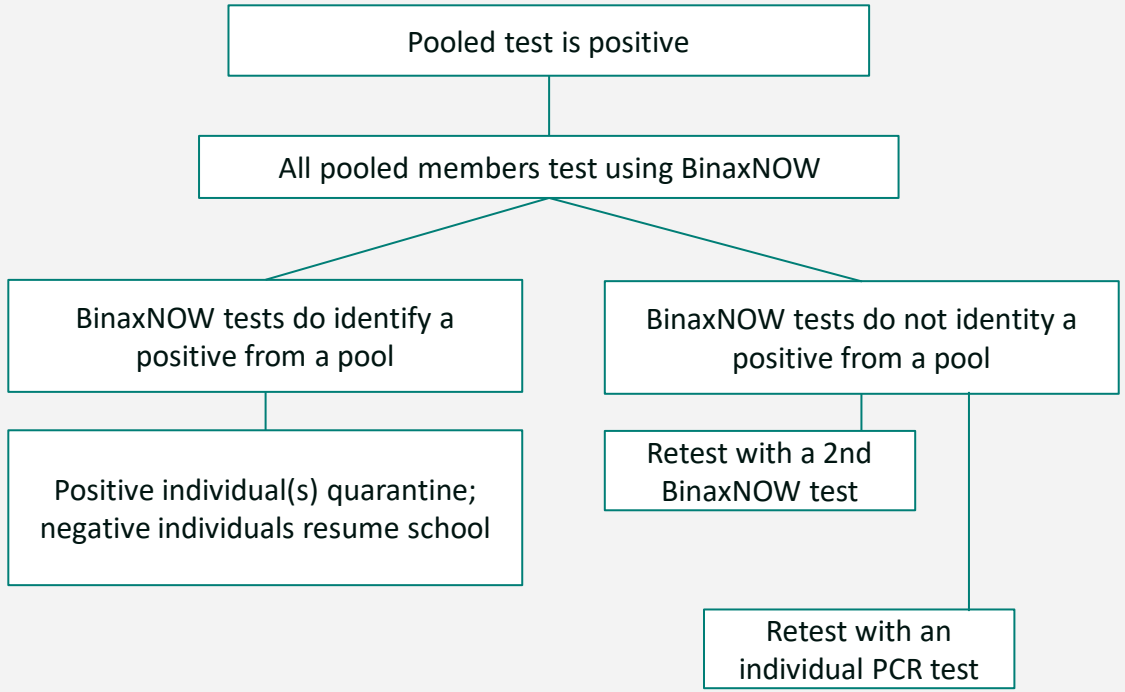


When compared to PCR tests, BinaxNOW is **accurate in detecting COVID-19 in children with moderate to high viral loads,** even if they are asymptomatic.

These children are the most likely to be highly contagious and transmit the disease.

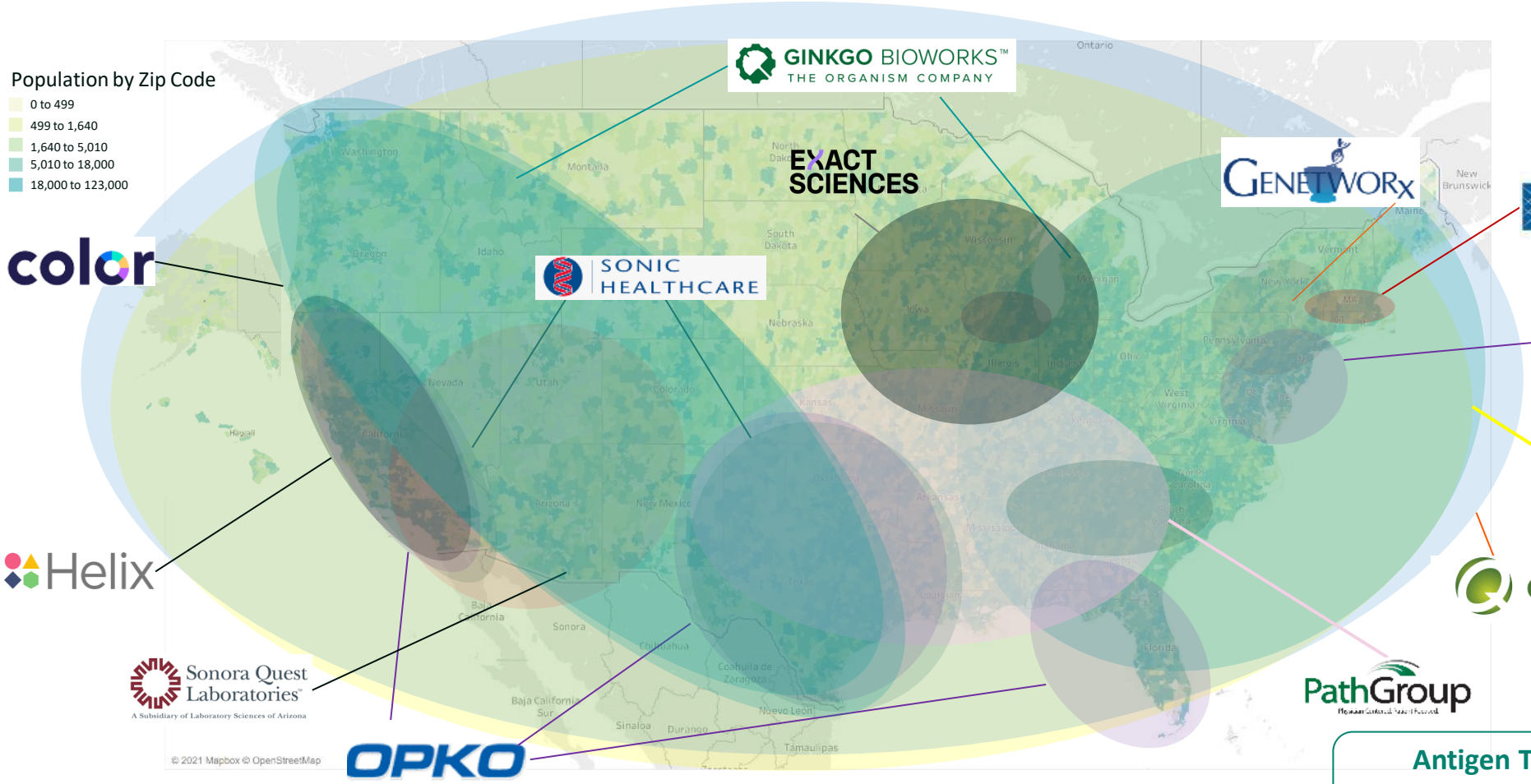
One potential follow-up testing approach

Example: BinaxNow in Massachusetts



Sources: Massachusetts Department of Elementary and Secondary Education, BinaxNow Study, Covid Response Advisors

WHO PROVIDES TESTING: LAB FOOTPRINT FOR SCALING K-12 TESTING



Antigen Test Suppliers

Abbott BD QUIDEL

Note: Lab coverage areas are approximate within national map.
Additional coverage possible through public health and university labs

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WHAT WILL IT COST: ALL-IN COST ESTIMATES AND ASSUMPTIONS

ALL-IN COST PARAMETERS	ASSUMPTIONS
$30 per person for Step 1: asymptomatic testing $10-15 per person: pooled PCR or antigen tests $15-20 per person: school administrative costs	Per person testing costs, including school administrative costs, are estimated from current operations in school testing programs
$60 per person for Step 2: positive pool follow up $40-50 per person: individual PCR or antigen $5-10 per person: school administrative costs	Assumption that ~1% of pools are positive and require deconvolution / Step 2 testing

Sources: Testing for America; estimates include PPE, logistics, software, labor, and overhead

K-12 NATIONAL TESTING ACTION PROGRAM: IMPLEMENTATION LOGISTICS

The ROCKEFELLER FOUNDATION

HEALTH CATALYSTS GROUP

MINIMUM STANDARDS FOR PROGRAM SUCCESS

STANDARDS FOR SUCCESS		
A. School and community alignment and engagement	D. Resources to administer and process tests efficiently and effectively	G. Regulatory support
B. 'Right test, right place, right time'	E. Clear public health guidance and resources for every stage of the process	H. Ensuring equity and broad access
C. Necessary supply of tests, supplies and other resources	F. Reporting and data systems	

Minimum standards help ensure quality testing programs are available to all students, teachers and all staff, while still allowing the schools flexibility to design and customize their programs based on their unique context and needs

PROGRAM MINIMUM STANDARDS (1 OF 2)

A. School and community alignment, engagement and education

- School committees, superintendents, teachers, unions and families should understand the goals of the testing program and how it helps to safely and sustainably reopen

B. "Right test, right place, right time" (pooling or individual testing strategy)

- A standardized menu of testing protocols and workflows should be designed for schools that offer 24-hour results to test takers
- Testing programs should screen students and staff at a frequency that prevents outbreaks and enables the quarantining of individuals who test positive

C. Necessary supply of tests, supplies and other resources

- A stable and reliable supply of tests with a consistent process and result reporting should be available
- Fulfilling school demand nationally requires multiple types and sources of tests

D. Resources to administer testing programs efficiently and effectively

- Testing service providers should manage procurement, contracting and onboarding with individual districts and schools
- Testing playbooks and toolkits can explain how to roll out and manage a testing program at the district or school level
- Testing lead or coordinator should be appointed for each school; potentially a school nurse, school administrator, district administrator, or USPHS Commissioned Corps

E. Clear public health guidance and educational resources for every stage of the process

- Easy-to-understand rationale for and explanation of testing protocol is critical
- Situations that necessitate confirmatory tests require some guidance
- There should be an explanation of how schools and families should react to a positive case in school or in household
- Protocol for quarantine and return-to-school should be published

PROGRAM MINIMUM STANDARDS (1 OF 2)

F. Reporting and data systems

- Aggregate pool results should be reported to school, parents and student; tracking should be facilitated by online secure software products
- Any positive individual diagnostic results – whether antigen or molecular -- should be reported to local public health authorities per existing public health laws and facilitated by HIPPA-compliant software products
- Test results are intended to keep school open and are not aimed at individual diagnostics

G. Regulatory support

- Standard consent for adults and students is necessary, including release of personal health data as appropriate
- A quick and easy option is to have schools designated as CLIA sites for POC testing when relevant
- It can be useful to have a standing physician order to authorize individual diagnostic tests under school testing protocol

H. Ensuring equity and broad access

- All public schools and districts are encouraged to take participate in program
- Testing programs should be offered at no cost to schools or participants or families
- State and local customization can provide varying levels of support for school districts with differing needs
- Test demand forecast can be created on objective factors (# students, ages, geographic densities et. al.)

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

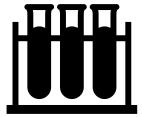
Key steps

1) Coordination & administration	2) Testing modality selection	3) Facility set-up	4) Results reporting
• Establish key positions & roles • Hire, train and build partnerships • Receive authorization and registration for testing	• Choose testing partner(s) • Finalize protocols for Step 1 Asymptomatic Screening and Step 2 Follow-up Testing for positive pods • Decide on Initiation Testing	• Set-up on-site, centralized, decentralized or other physical models	• Decide reporting strategy • Establish procedures for reporting positive results and confirmatory testing

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

For additional resources to support school operations and planning, see: Testing for America

WHAT DO SCHOOLS DO: COORDINATION AND ADMINISTRATION

Successful implementation, coordination and administration requires that schools fill staff positions prior to launching K-12 NTAP; schools can choose to hire additional employees, partner with external stakeholders, and/or train existing staff for these roles

Positions necessary to implement K-12 NTAP

Coordinator(s)

Oversee the daily operations and verify authorization/consent and registration

Ushers

Direct students, teachers and staff to testing locations

Test Administrators

Collect or oversee sample collection

Logistics Leads

Ship collected samples to labs and maintain shipping records

Quality Controllers

Manage safe testing environment and disposal of biohazards

Results Manager

Ensure all results are promptly shared with key stakeholders

Depending on the position being filled and experience of the individual, specific trainings and certifications may be needed

A combination of hiring, training and partnerships can be used for these positions. Options include:

Hire temporary employees

Partner with external stakeholders (e.g., Commissioned Corps or health professionals)

Train existing staff

Example: Watertown Public Schools, Broad Institute and CIC Health collaborated to administer individual testing for high need students

- ✓ School nurses championed, coordinated, and administered testing
- ✓ School nurses provided in-house training for ancillary support
- ⋙ Cost savings from leveraging in-house resources

Source: Watertown Public Schools

WHAT DO SCHOOLS DO: SETTING UP COLLECTION FACILITIES

To maintain quality and consistency, on-site collection (e.g., at schools, local pop-up labs, etc.) is preferred to at-home collection. School's can tailor their on-site collection set up based on size, resource availability and testing modality

Set-up options

Centralized (walk-up)

Examples: Gym, cafeteria

When it works well:

- ✓ High-volume testing
- ✓ Limited testers available
- ✓ Test technologies that require more equipment or storage

Challenges:

- ✓ Space may already be in use for other school activities and social distancing needs

Decentralized

Examples: Individual classrooms

When it works well:

- ✓ Homeroom or pod model
- ✓ Minimizes day-to-day disruptions for younger students (more familiar to them)

Challenges

- ✓ Staff capacity
- ✓ Transporting PPE and supplies to each location (e.g., hazard waste removal)

Centralized (drive-thru)

Examples: Parking lot, drop-off zones

When it works well:

- ✓ Areas with high community prevalence (limits potentially infected individuals from entering common areas)
- ✓ For testing one-time visitors, substitute teachers, etc.

Challenges:

- ✓ Sufficient physical space may not be available

Alternative collection approaches

At-home collection may be used when the individuals are already showing Covid-19 symptoms or when a school lacks the staff needed to test the volume of students necessary

Off-premise testing at pharmacy or other third-party location may be used when individuals prefer their primary care provider to testing in school

Example: Washington International School and UnitedHealth Group collaborated to perform weekly pooled rapid testing

- 👍 Centralizing sample collection to make it easy was the key to success
- 👍 Using a phased approach allowed continuous improvement in sample collection methods

Photo Credit: Natasha Bhalla

Source: UnitedHealth Group

WHAT DO SCHOOLS DO: RESULTS REPORTING

Regular and prompt reporting of results to testing participants and their families, schools and school districts and the state and federal government is critical to maintaining safe school environment and overall public health

What to report on

Results to students, teachers and staff

PCR pool test results / antigen test results
Clearly and promptly provide test results as soon as they are available

Quarantine and isolation guidance
Reshare quarantining and isolation guidelines when positive pools/individual tests are identified

School positivity rates and trends
Regularly share updates to the school community on the total number of cases and positivity trends to maintain trust

Results to local, state and federal government

Positive cases
Provide regular updates on the total number cases and positivity trends at school or school district level (according to state and federal guidelines)

Tools and technologies to facilitate reporting

- **Centralized information platform** to store data with the ability to remove PII and aggregate at school district level as needed per FERPA and HIPAA guidelines
- **Website and/or text messaging** options to share results as soon as they are available
- **Inquiry form** to get status updates if the test results are not available in the expected timeframe

Example: Washington International School and UnitedHealth Group collaborated to perform weekly pooled rapid testing

- Use cloud-based information management system to track results and communication
- Report results to parents, staff and students within 40 minutes
- Created list of easily accessible FAQs about testing, operations, data security and safety

Source: UnitedHealth Group

SCHOOL OPERATIONS IN ACTION: SCHOOL NURSE PERSPECTIVE

Nurse Jamie is the head nurse at a high school in a city supporting the school principal and the district superintendent as they adopt the K-12 NTAP. She firmly believes that both students and teachers should be tested regularly if the school is to reopen for in-person learning

Coordination and test modality

Over the last few weeks, the Nurse Jamie (testing coordinator), the district superintendent, principal and school nurses have coordinated to obtain consent to test and completed registration to begin testing. They have determined that groups of 10 students will be pooled and teachers tested individually, all via PCR testing. Pre-paid vouchers for confirmatory testing will be provided to parents in positive pools

Set-up

Nurse Jamie, in close collaboration with the school nurses, helped by hiring additional temporary staff to help with ushering, testing and shipping tasks. She also helped coordinate the set-up of testing booths in the gym for students and a separate area to test teachers. The testing team conducted a dry run of all operation on Sunday before school reopened

Sample collection

It's Monday and students and teachers begin to arrive to school. Nurse Jamie is in the command center of the school making sure that all individuals are getting tested. Once all the test samples are collected, Nurse Jamie checks in with the logistics staff to ensure all samples get shipped promptly to the nearby labs

Results reporting

Nurse Jamie gets to school early on Tuesday and sees she has an email from the lab saying that 2 pools in grade 8 tested positive. She immediately sends an email voucher to the parents of the students in the pool to get an individual test

When she comes back on Wednesday, she sees emails from all the parents who needed to get individual tests and 3 out of the 30 students were positive while the others negative for Covid-19. She authorized the remaining 27 to come back to school the following Monday and shared the update with school Principal and Superintendent

SCHOOL OPERATIONS IN ACTION: STUDENT PERSPECTIVE

Molly's school has worked hard to implement the K-12 NTAP program, which is a national testing strategy that allows teachers and students to safely come back to school in-person. She can hardly contain her excitement to start school this coming week because she will finally be able to see her friends and teachers in-person

Engagement

Over the last few weeks, Molly's parents have been talking with the school about the new testing program to understand all the steps they are taking to safely test Molly and keep her safe when she is in school. They have filled out required consent forms and registered for regular testing

Testing

It's Monday and when Molly arrives at school with her new rainbow mask, one of the school staff checks her in and directs her to head to the gym with the rest of her homeroom classmates. There are arrows on the ground directing her to one of the several tables that are set up in the gym. She only waits in line for 5 minutes (standing 6 feet apart from her classmates of course)

When it is her turn, the school nurse watches Molly swab her nose. That took only a minute and wasn't as scary as she thought it would be! Then Molly follows the arrows out of the gym and back to her class for the rest of the day

Results

Molly comes back to school on Tuesday. While her whole class is there, the class next to them is empty because someone in that pod had a positive test. The teacher explains that the students in that pod will be tested again to confirm the positive individual

Molly's parents are made aware the positive pod pool but reminded of schools' general low overall prevalence rate. They are also reminded of the voucher program which will enable those students to get confirmatory antigen tests to confirm the positive individual, who will then remain at home for the necessary time

Molly's parents receive another email from the school on Wednesday confirming the Covid-19 positive individuals were successfully identified and asked to continue in-home learning for at least 2 weeks and provide a Covid-19 negative result. For contact tracing purposes, they were also told that Molly was not in contact with the Covid-19 positive individuals and should attend school normally

WHO IS NEEDED: BUILDING CONFIDENCE FOR PARTICIPANTS

Wide-spread adoption and participation relies on building confidence for participants by understanding their priorities and concerns. State and local leadership must proactively reassure and address the concerns of stakeholders

	Superintendents	Teachers and staff	Parents	Students
Priorities and Concerns	• All willing individuals are getting tested • Results are obtained quickly • Payments and funding vehicles are in place	• Keeping themselves and students safe • Preparing for when someone gets sick in school • Missing work when they test positive • Data privacy • Test collection safety	• Safety of children • Testing without parent/guardian present • Perceived cost and time of confirmatory test if applicable • Data privacy • Test collection safety	• Fear of getting the swab • Test collection safety • Stigma or lost school time linked to positive results
Actions to Build Confidence	• Set frequency and sensitivity standards • Provide easy-to-use consent forms • Provide central POC to ask questions	• Provide guidance on isolation and other mitigation strategies • Bring in trained people to administer tests • Be transparent about data privacy and use	• Provide information on getting confirmatory tests • Make consent forms easy to understand • Provide results quickly • Be transparent about data privacy and use	• Make the testing process as easy as possible to reduce stress and anxiety • Provide guidance on what do you if you're feeling sick

*Note: The Testing for America K-12 Playbook provides a tactical communications plan to engage stakeholders including who is responsible for the communication

For additional resources to support school operations and planning, see: Testing for America

CONTACT INFORMATION (1 OF 3)

General Information						Testing Technology				Experience and Readiness		
Company	HQ	Contact Name	E-mail	National Reach?	Regional Reach	PCR - pooled	PCR - individual	Antigen without instrument	Antigen with instrument	Experience with K-12 Testing	Own lab or partner lab?	Ready to start testing?
				Yes / No	*State or Region*	*Yes / No*	*Yes / No*	*Yes / No*	*Yes / No*	*Yes / No*	*Own / Partner*	*Yes / No*
BD (BD Veritor)	NJ	TJ Salerno; Jeff Eisinger	thomas.salerno@bd.com; jeff.eisinger@bd.com	Yes	West Region; East Region	No	No	No	Yes	Yes	Partner	Yes
BioReference Laboratories	NJ	Ellen Beausang	ebeausang@bioreference.com	Yes	All	Yes	Yes	Yes	Yes	Yes	Own	Yes
CIC Health	Cambridge, MA	Lindsay Clark	clark@cic.com	Yes	All	Yes	Yes	Yes	Yes	Yes	Broad Institute	Yes
Color	Burlingame, CA	Caroline Savello	caroline@color.com	Yes	All	Yes	Yes	Yes	No	Yes	Both	Yes
Exact Sciences	Madison, WI	Melanie Hayward	mhayward@exactsciences.com	Yes	Midwest	Yes	Yes	No	No	Yes	Own	Yes
GENETWORx	Glen Allen, VA	Maryrose Roberts	mroberts@recoverycoa.com	Yes	All	Yes	Yes	Yes	No	Yes	Own	Yes
Ginkgo BioWorks	Boston, MA	Matt McKnight	mmcknight@ginkgobioworks.com	Yes	All	Yes	Yes	No	No	Yes	Partner	Yes
Helix	San Mateo, CA	Ed MacBean	edgar.macbean@helix.com	Yes	All	Yes	Yes	No	No	Yes	Own	Yes

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CONTACT INFORMATION (2 OF 3)

General Information						Testing Technology				Experience and Readiness		
Company	HQ	Contact Name	E-mail	National Reach?	Regional Reach	PCR - pooled	PCR - individual	Antigen without instrument	Antigen with instrument	Experience with K-12 Testing	Own lab or partner lab?	Ready to start testing?
				Yes / No	*State or Region*	*Yes / No*	*Yes / No*	*Yes / No*	*Yes / No*	*Yes / No*	*Own / Partner*	*Yes / No*
LabCorp	Burlington, NC	Kevin DeAngelo	deangek@labcorp.com	Yes	All	Yes	Yes	Yes	Yes	Yes	Own	Yes
PathGroup	Brentwood, TN	Richard Halstead; Brent Sower	rhalstead@pathgroup.com; bsower@pathgroup.com	Yes	All	Yes	Yes	No	No	Yes	Own	Yes
Quest Diagnostics	Secaucus, NJ	Stacia Rivello	stacia.x.rivello@questdiagnostics.com	Yes	All	Yes	Yes	Yes	Yes	Yes	Own	Yes
Quidel Corporation	San Diego, CA	Patrick Sweeney; Rick Graham	patrick.sweeney@quidel.com; rick.graham@quidel.com	Yes	All	Yes	Yes	Yes	Yes	Yes	Partner	Yes
Sonic Healthcare USA - Clinical Pathology Laboratories	Austin, TX	Tony Jones	tjones@cpllabs.com	Yes	TX, LA, OK, NV, NM	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - Clinical Labs of Hawaii	Honolulu, HI	Michele Cox	michele.cox@hawaiilabs.com	Yes	HI	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - American Esoteric Laboratories	Memphis, TN	David Smalley, PhD	dlsmalley@ael.com	Yes	TN, MO, AR, MS	Yes	Yes	Yes	Yes	Yes	Own	Yes

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CONTACT INFORMATION (3 OF 3)

General Information						Testing Technology				Experience and Readiness		
Company	HQ	Contact Name	E-mail	National Reach?	Regional Reach	PCR - pooled	PCR - individual	Antigen without instrument	Antigen with instrument	Experience with K-12 Testing	Own lab or partner lab?	Ready to start testing?
				Yes / No	*State or Region*	*Yes / No*	*Yes / No*	*Yes / No*	*Yes / No*	*Yes / No*	*Own / Partner*	*Yes / No*
Sonic Healthcare USA - Sunrise Medical Laboratories	Hicksville, NY	Alan Greenberg	agreenberg@sunriselab.com	Yes	NY, CT, DC, MD, VA	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - West Pac Laboratories	Santa Fe Springs, CA	Joel Bentz, MD	jbentz@westpaclab.com	Yes	CA	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - Eastside Clinical Laboratories	Providence, RI	Gary Sammarco	gary@esclab.com	Yes	RI, MA	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - Bernhardt Laboratory	Jacksonville, FL	Bruce Walton	bwalton@auroradx.com	Yes	FL	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - Laboratory Medicine Consultants	Las Vegas, NV	Bruce Walton	bwalton@auroradx.com	Yes	NV	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - Seacoast Pathology	Exeter, NH	Bruce Walton	bwalton@auroradx.com	Yes	VT, NH	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonic Healthcare USA - Greensboro Pathology Associates	Greensboro, NC	Bruce Walton	bwalton@auroradx.com	Yes	NC	Yes	Yes	Yes	Yes	Yes	Own	Yes
Sonora Quest Laboratories / Laboratory Sciences of Arizona	Phoenix, AZ	Sonya Engle; Tom Leggett	sonya.engle@sonoraquest.com; tom.leggett@sonoraquest.com	No	Arizona	Yes	Yes	No	No	No	Own	Yes
Veritas Genetics	Danvers, MA	Mirza Cifric	mcifric@veritasgenetics.com	Yes	All	Yes	Yes	No	No	Yes	Both	Yes

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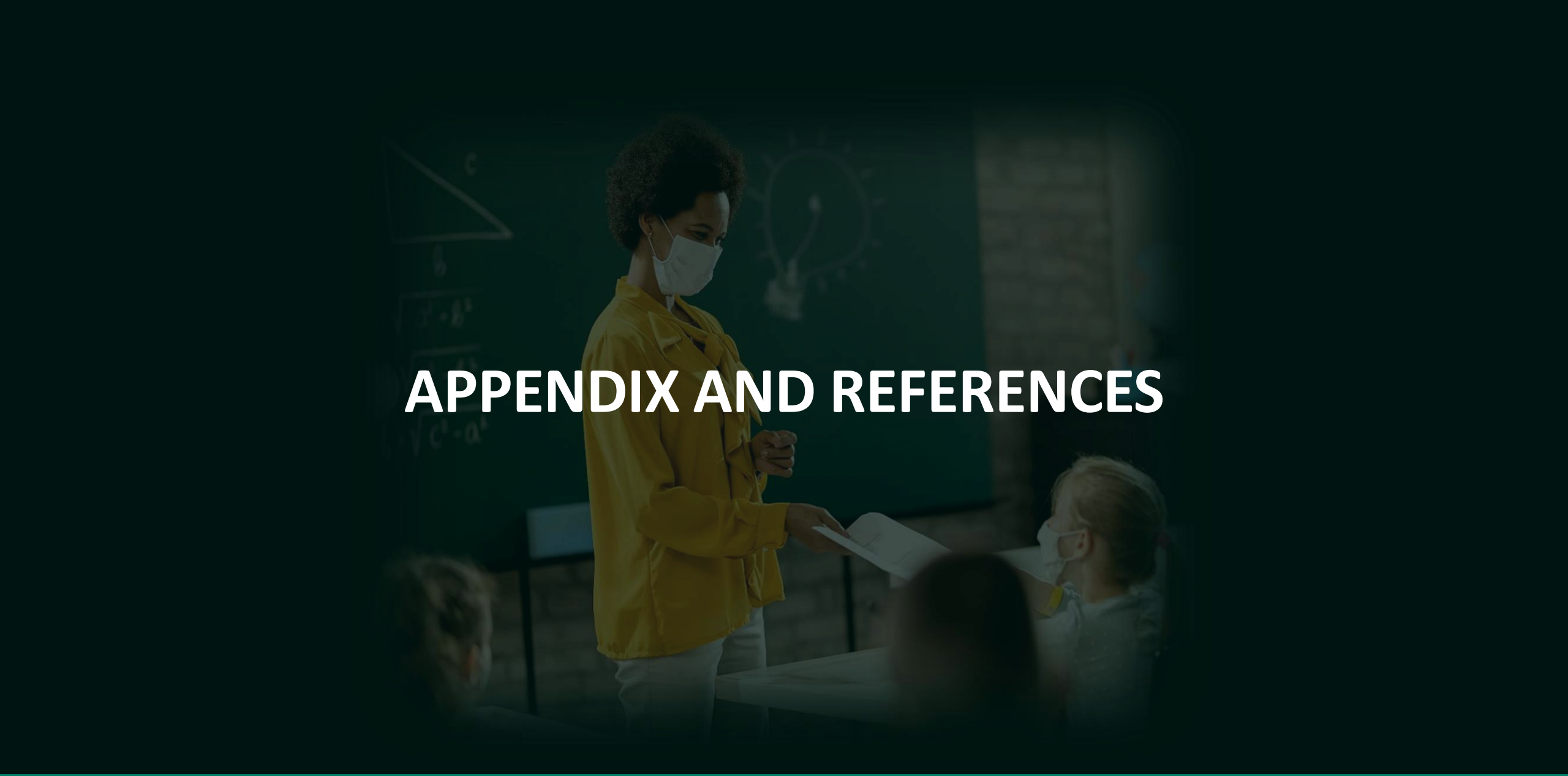

APPENDIX AND REFERENCES

The ROCKEFELLER FOUNDATION

HEALTH CATALYSTS GROUP

CDC RECOMMENDS SCREENING TESTING TO REDUCE TRANSMISSION

"Viral testing strategies in partnership with schools should be part of a comprehensive prevention approach. Screening testing is intended to identify infected people without symptoms…to prevent further transmission." – CDC Guidelines

	CDC Recommendations for Screening Testing		
Community transmission	**Students**	**Teachers**	**Athletics**
Low (~30% of states) *In last 7 days, 0-9 new cases per 100K, <5% positive tests*	• **No screening** testing 	• At least **once per week** 	• At least **once per week** 
Moderate (~70% of states) *In last 7 days, 10-49 new cases per 100K, 5-7.9% positive tests*	• At least **once per week** 	• At least **once per week** 	• At least **once per week** 
Substantial or High (~0% of states) *In last 7 days, 50+ new cases per 100K, 8%+ positive tests*	• At least **once per week** 	• At least **once per week** 	• **Twice per week** for high-risk sports, at least once per week for all others 

Given the **CDC recommends screening testing in schools in most instances**, it is critical to establish a program that is **easy to administer** and **requires minimal additional resources** from schools

Sources: CDC recommendations; State transmission rates (New York Times)

BUSINESS AND HEALTH LEADERS SUPPORT SCHOOL REOPENING

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GUIDING PRINCIPLES FOR K-12 NTAP DEVELOPMENT

The K-12 NTAP team operates by a set of core principles which have guided the design and implementation of the program:

- **Think Big but Design Small** – Standardize guidance to be widely applicable and scalable yet also tailorable for state-level coordination and school or district-level implementation
- **Provide Clear, Simple and Realistic Guidelines** – Encourage use and adoption by making the guidelines easy to follow and proactively identifying ways to reduce barriers
- **Be Reasonably Comprehensive** – Provide a common platform to understand the minimum requirements for K-12 testing at a broad level to enable the return of in-person learning
- **Be Focused** – Prioritize testing solutions and strategies. Other mitigation strategies are assumed but secondary to this program (e.g., vaccine distribution, masking, physical distancing)
- **Enable Agility** – Develop a plan that is practical and sustainable, while acknowledging the dynamic environment and likely necessity of real-time adaptation
- **Build Capacity –** Identify ways meet demand for K-12 testing without diminishing existing testing capacity
- **Minimize Burden** – Minimize burden on schools and families throughout the process to increase adoption

QUESTIONS AND FOLLOW UP

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