

COVID-19 TESTING GUIDANCE FOR SCHOOL COMMITTEES

INFORMATION AND
BEST PRACTICES FOR THE
EFFICIENT AND EFFECTIVE
IMPLEMENTATION OF
COVID-19 TESTING IN SCHOOLS

EXECUTIVE SUMMARY

This document was created by community and School Committee members of the Safer Teachers, Safer Students (STSS) collaborative to share information and best practices about the efficient and effective implementation of COVID-19 testing in Massachusetts K-12 schools. Our goal is to provide an overview of why testing is an important mitigation strategy, information on various testing options, strategies for implementation, and suggestions for evaluating each method based on your district's size and needs.

WHY TESTING IS CRITICAL

- Maximizes in-person learning for students
- Allows districts to make data-informed decisions about learning model within each school
- Helps prevent community spread by identifying asymptomatic cases
- Establishes trust and provides reassurance in efficacy of safety protocols and mitigation efforts
- Reduces fear and anxiety among staff, students, and families about in-person learning, leading to a more positive teaching and learning experience

WHAT MAKES TESTING SUCCESSFUL

- Science-based program to identify asymptomatic and pre-symptomatic individuals
- Support and advocacy by Superintendent and School Committee
- Collaboration with local officials, including Board of Health and municipal leaders
- Strong testing team that includes appropriate personnel and infrastructure:
 - Testing Champions (Superintendent, Director of Nursing/School Health, Director of Wellness)
 - Program Manager or Project Coordinator to assist in all aspects of testing preparation and implementation
 - Testing Managers (Director of Nursing and nursing staff or outside healthcare professionals)
 - Contact Tracers (nursing staff and/or Board of Health)
- Transparency and two-way communication with community
 - Provide forum to ask questions and address concerns
 - Share regular updates via online COVID information hub, weekly newsletters, and/or email
- Clearly articulated plan for reflex testing and quarantine protocols
- Clearly outlined plan for sharing test results with the community that balances privacy and transparency
- Buy-in from Teacher's Union and the community
 - Transparency and the sharing of data are essential to this. See Appendix B: Helpful Resources at the end of this document for shared best practices and suggestions for success.



[Survey results from the Wellesley Education Foundation](#) found parents and staff felt significantly more comfortable with in-person learning after testing was implemented. Prior to baseline testing, only 12% of staff and 39% of parents reported being mostly or very comfortable with in-person learning. After baseline testing, 82% of staff and 87% of parents were reassured about a return to in-person learning.

UNDERSTANDING TESTING OPTIONS

POOLED TESTING

In pooled testing, samples are gathered from multiple people and mixed together. Instead of testing each individual sample on its own, the lab tests the pool. If the pool tests negative, then all of the individuals in that pool are negative. If a pool tests positive, a re-test of all members of the pool is necessary. This is called “deconvolution” or reflex testing. Some labs are able to deconvolute results to identify the positive case(s) with the same initial sample, often on the same day. Others require that a second sample be collected and tested from each individual in the positive pool. Pools can range in size from 5 to 25 depending on the methods used by the lab. Pooled testing is an efficient, precise, and cost-effective way to detect the virus in a population, such as a school or class, and is appropriate for surveillance testing.

There is [increasing evidence](#) that the community rate (% of individuals in a community that are positive) is significantly lower than the test positivity rate (% of tests that are positive). Most testing efforts have found that schools have lower positivity rates than their broader communities. Surveillance testing of staff and students can provide a more accurate assessment of the relevant positivity rate in your schools, which is helpful to know when deciding which learning model (remote/hybrid/full return) is appropriate. Districts in high prevalence areas (>5-6% community positivity rate) might benefit from using smaller pool sizes; otherwise, pools could be too frequently positive.

INDIVIDUAL TESTING

In individual testing, a sample is gathered from one person and processed by itself. Individual testing, while effective, is cost-prohibitive for many districts; however, it can be useful for an initial, or “baseline,” testing program. There are different options for individual testing, including PCR and antigen tests, as outlined below.

TYPES OF TESTS AVAILABLE

PCR (POLYMERASE CHAIN REACTION)

ANTERIOR NASAL SWAB

This test uses shallow nasal swabs to collect a sample which is then placed in a tube and sent to a lab for processing. The lab process for the PCR test takes just a few hours but turn-around times may be longer due to lab capacity and the time required to ship samples to the lab.

PCR SALIVA TEST

This test uses the same PCR technology but utilizes a saliva sample instead of a nasal swab. A test kit with a collection tube is given to each individual and returned with a saliva sample. Processing time is similar to anterior nasal swab.

RAPID ANTIGEN TESTING (BINAX NOW)

This test uses a shallow nasal swab to collect the specimen and must be performed by a trained medical professional. Results can be expected in about 15 minutes. BinaxNOW is recommended by DESE and the Massachusetts Department of Public Health (MDPH) as the reflex test for a positive pool. Some school districts will use BinaxNOW as the only method of deconvolution to determine which individuals in a pool are positive for COVID-19. Others are electing to perform a more sensitive PCR test to deconvolute pools. BinaxNOW is also being used for symptomatic individuals, such as students or staff who begin to exhibit symptoms during the school day. A recent [study](#) done by MDPH ran the BinaxNOW test in parallel with PCR tests at the Lawrence Stop the Spread site and found that BinaxNOW can potentially detect asymptomatic cases. Learn more about BinaxNOW [here](#).

THE DESE OPTION

DESE, in collaboration with MDPH, is now offering a COVID-19 screening program using a pooled testing approach. Participating districts will receive the test kits, technical support from a testing service provider, and the testing software to track results - all at no cost to them - until March 28, 2021. Funds for logistical support (e.g. project manager, testing staff) are not included. After March 28, districts may contract directly with select service providers. DESE is currently negotiating master service agreements with several vendors. If districts do not participate in the program, they may still contract with the vendors at the negotiated rates. More information about the DESE pooled testing program can be found [here](#).

HOW TO CHOOSE WHICH OPTION IS BEST FOR YOUR DISTRICT

The [Testing Decision Tree](#) (Appendix A) outlines various testing options for districts.

Many districts have prioritized testing in the following manner:

- Symptomatic individuals
- Faculty and Staff
- Older students (HS and MS)
- Younger students

CASE STUDIES

TEST TYPE	TESTING SERVICE PROVIDER (LAB)	DISTRICTS ALREADY IMPLEMENTING (as of 2/7/21)
Saliva Pooled Testing	Mirimus* (Mirimus)	Lexington (staff, MS and HS students, remote students participating in athletics), Martha's Vineyard (random sampling of staff and students); Neighborhood Villages (early education and OST programs); Salem (staff and HS students); Wellesley (staff, MS and HS students); Westwood (staff, planning to expand to students)
Nasal Swabbing	CIC-Health (Broad)	Harvard (pooled testing, then individual PCR and BinaxNOW reflex); Newton (voluntary individual testing offered to teachers in a central testing center); Northboro/Southboro (symptomatic testing and initial individual staff testing; two rounds of individual screening for HS students before going to pooled testing); Watertown (individual testing for staff; pooled testing with individual reflex testing if needed for students);
	Concentric by Ginkgo (Ginkgo)	Haverill (pooled testing for students and staff) Medway (pooled testing for students with BinaxNOW reflex) Sharon (pooled testing for staff and student with BinaxNOW reflex)
	JCM Analytics* (Cian)	Medway (staff only; pooled testing with individual reflex testing if needed); Northboro/Southboro (pooled testing for staff and students)
	Project Beacon (Broad)	Salem (pooled testing of elementary and MS students) Weston (individual testing of staff and students)

* Can do pool and individual testing off the same initial sample. No second sample required for reflex testing.

HOW TO GET STARTED

While districts have faced a wide range of challenges this year, we are all working toward the same goal: getting our students back in school. Implementing a regular testing program can be an important step toward achieving this goal and ensuring the health and safety of our communities. The financial and human resources required to make testing successful should be carefully considered. The information that follows outlines the important roles and responsibilities of various members of the Testing Team that will contribute to the smooth and effective implementation of testing in your district. Additional links to valuable resources and information can be found in Appendix B.

ROLE OF THE SUPERINTENDENT AND SCHOOL COMMITTEE

Any testing program will require funding and personnel. For this reason, the School Committee should review and vote on any plan to implement testing in your district. The Superintendent will play a major role in communicating information about testing to families, teachers, staff, and the greater community. This can also include hosting informational sessions and surveying parents/guardians to gauge interest in participation. School community buy-in is a critical element of the testing process.

COSTS AND FUNDING MODELS

DESE's plan should help make testing more widely available throughout the Commonwealth but additional funding is often required, particularly for logistical support. Several funding models have been used by districts that have effectively implemented testing. Some districts have privately raised funds through their education foundations or are considering a student fee for testing. Others have used municipal CARES Act funds, while some have received support from private foundations. We are hopeful that more funding and access to testing resources will be available in the future.

ROLES AND RESPONSIBILITIES OF THE TESTING TEAM

A variety of human resources are required to efficiently and effectively implement a testing program. Specifically, staffing is required to oversee the following:

- Clear communication with constituents to develop buy in for the testing program; can include maintenance of online informational hub
- Management of contractual relationship with Testing Partner; includes ensuring the service agreement is being met and the district is being invoiced accurately
- Management of parent permissions/testing consent forms and/or registration
- Management of weekly testing activities (including securing and distributing supplies, coordination of sample submission, packaging and shipping of samples)
- Communication of test results (in surveillance testing, individuals are usually only notified if their pool is positive)
- Coordination of follow-up/reflex testing (necessary in a pooled testing model to determine who may return to school and who must quarantine)
- Contact tracing

In many instances, an additional FTE is needed to fulfill these roles in the form of a Project Coordinator or Program Manager. Additional oversight might be required depending on the populations being tested and the chosen testing model. Some districts have been able to use nursing staff in varying capacities while others have relied on volunteers to help with testing logistics. While several vendors offer turnkey programs, the staffing they provide comes at a steep cost.

THE FUTURE: VACCINES AND BEYOND

K-12 teachers and staff are scheduled to be part of Phase 2 of the [Massachusetts vaccine rollout](#). The Biden administration has indicated there will be major improvements in the vaccine rollout across the country, so the landscape for this will be changing rapidly.

The two vaccines currently approved for emergency use - Pfizer and Moderna - have not completed clinical trials in children. Pfizer has been approved for students age 16+. Moderna has been approved for students 18 +. Clinical trials are currently underway in children ages 12 to 16. Additional vaccines are in Phase Three clinical trials and may be approved for emergency use in the coming weeks, including vaccines from Astra Zeneca and Janssen (Johnson & Johnson). At this time, we are uncertain if or when any vaccines will be approved for children.

Even with staff vaccinated, studies show that a testing program will continue to play an important role in reducing infections within school communities, especially if newer, more transmissible variants predominate. Some districts are currently planning for continued staff and student surveillance testing into the 2021-22 school year. Links to modeling studies are available [here](#) and [here](#).

CONTINUED SUPPORT

We recognize that implementing a regular COVID-19 testing program requires significant planning, time, and resources. As School Committee members of districts that have already been through this process, we invite you to reach out to any of us with questions. We are happy to share additional information that might be of interest to you. Please feel free to take this [quick survey](#) to let us know how else we might be able to help, what topics you would like to learn more about, and whether you are interested in pairing up with one of us as part of a testing mentorship initiative. We are here to help support you through this journey and welcome your partnership.

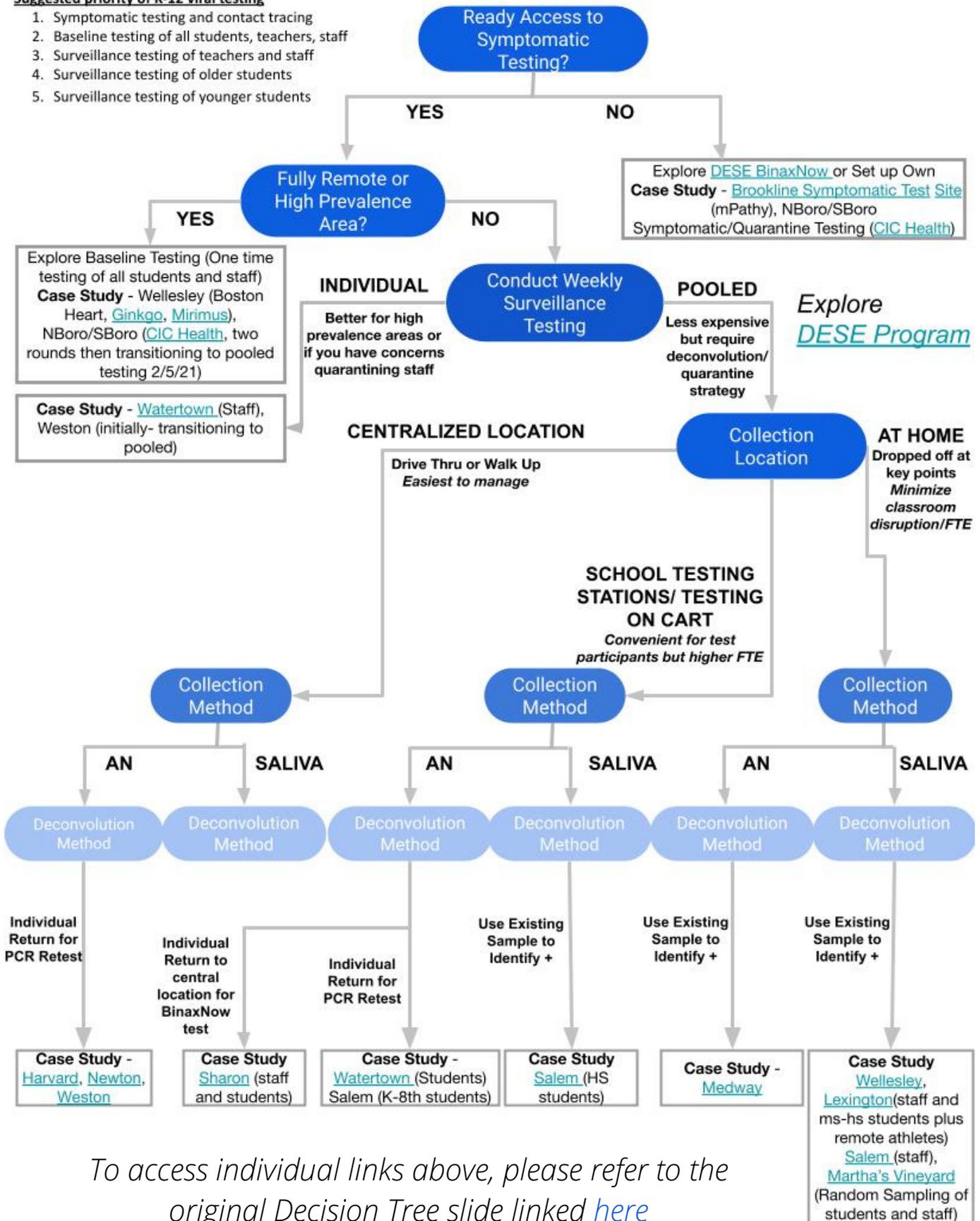
PREPARED BY COMMUNITY AND SCHOOL COMMITTEE MEMBERS OF THE SAFER TEACHERS, SAFER STUDENTS COLLABORATIVE

• Margaret Albright	Newton	12,600 students	albrightma@newton.k12.ma.us
• Linda Chow	Wellesley	4,500 students	chowl@wellesleyps.org
• Charles Donahue	Westwood	3,000 students	cdona@aol.com
• Katey Goehringer	Wellesley	4,500 students	kateygoehringer@yahoo.com
• Sharon Gray	Wellesley	4,500 students	grays@wellesleyps.org
• Shannon Molloy	Harvard	1,000 students	smolloy@psharvard.org
• Kathleen Mortimer	Weston	1,900 students	mortimer.kathleen@gmail.com
• Lauren Nassiff	Medway	2,100 students	lnassiff@medwayschools.org
• Kristin Pangallo	Salem	4,500 students	kpangallo@salem.com

APPENDIX A: TESTING DECISION TREE

Suggested priority of K-12 viral testing

1. Symptomatic testing and contact tracing
2. Baseline testing of all students, teachers, staff
3. Surveillance testing of teachers and staff
4. Surveillance testing of older students
5. Surveillance testing of younger students



To access individual links above, please refer to the original Decision Tree slide linked [here](#)

APPENDIX B: HELPFUL RESOURCES

Transparency and excellent communication by school leadership and administration is essential. To that end, several districts maintain **COVID-19 Dashboards** to keep the community informed about school-based metrics, case tracking, and district response to COVID cases. Examples of these and other invaluable resources can be found below:

WELLESLEY'S COVID HUB

- Includes [case tracking tool](#) and [Testing Program Summary](#)
- [School-based COVID response](#): protocols described in this document were important given the cluster that recently occurred at the high school. Includes [update on what was learned from that cluster](#).
- Superintendent issues weekly email updates about # of staff and # of students, # of cases by school, and # of cases detected via surveillance vs. external testing
- The [Wellesley Public Schools home page](#) also shares links to the following resources:
 - [Viral Testing FAQs](#) and [Reopening Metrics](#) (agreed upon by WPS, BOH, and Educators Assoc.)
 - Informational Webinars:
 - Re: [Scientific rationale behind viral testing pilot program](#) (co-sponsored with WEF featuring member of STSS's Scientific Advisory Committee)
 - Re: [Discussion of weekly surveillance testing](#) -- held prior to rolling out surveillance testing to students. (Testing was rolled out in phases: subset of staff the first week, all staff the second week, then all staff and secondary students in week 3)
 - Re: [Update to district COVID Dashboard](#); [slide deck linked here](#)
- The [Wellesley Education Foundation](#) site also offers many helpful resources. In particular, you will find the following information regarding the *Safer Teachers, Safer Students*: Back to School Pilot Testing Program at these links below:
 - [Program Overview](#)
 - [Scientific Advisory Committee Overview and Recommendations](#)

MEDWAY'S COVID HUB

- Includes weekly COVID metrics, [Guide for Families](#), [FAQs](#), and [Student Pool Testing resources](#)
- Superintendent issues weekly email updates about # of positive cases, # of close contacts created, and whether positive individuals had been in school during the infectious period

ADDITIONAL RESOURCES

- [American Academy of Pediatrics Journal Article: Incidence and Secondary Transmission of SARS-CoV-2 Infections in Schools](#)
- [COVID-19 Testing in K-12 Schools: Insights from Early Adopters](#)
- [MASC Coronavirus Resources](#)
- [STSS Dashboard \(coming soon\)](#)
- [Value Proposition of Viral Testing Slide Deck](#)
- [Website](#) designed to help K12 schools implement testing from the Shah Foundation

MEMBER DISTRICT COMMUNITY RESOURCES

- [Harvard's COVID-Safe Schools site](#), [Program Overview](#), and [FAQ Document](#)
- [Medway Public Schools](#)
- [Newton Public Schools](#)
- [Northboro/Southboro Public Schools](#)
- [Salem Public Schools COVID-19 Updates](#) and [Surveillance Testing Information](#)
- [Watertown Staff and Pool Testing Tips](#)
- [Weston Public Schools](#)
- [Westwood Public Schools](#)