Littleton Public Schools
Town of Littleton, MA

Pooled Testing Initiative

Program Overview

1/28/2021

Let’s dive in to pooled testing...

Schools can help protect students and their families, teachers, staff, and the broader community and slow the spread of COVID-19.

Pooled testing to screen for COVID-19 is part of a comprehensive strategy and should be used in conjunction with other mitigation strategies and promoting behaviors that reduce spread (e.g. social distancing, handwashing, regular cleaning of facilities, and the use of face masks).

Overview of pooled testing

- Pooling is the combining of respiratory samples from several people and conducting one laboratory test on the combined pool of samples to detect SARS CoV 2 (COVID-19). Pooling allows laboratories to test more samples with fewer testing materials, potentially increasing testing capacity.
    - Mixing several test samples together in a ‘pool’ and then testing the pooled sample with a PCR test for detection of SARS-CoV-2[1].
    - The test is performed once per week with an anterior nasal swab for all consenting staff and students.
    - Results are typically delivered in 24-48 hours
    - If a pooled test result is positive, then all individuals in the pool must quarantine until they are re-tested individually.
    - The Abbott BinaxNOW rapid point-of-care (results in ~15 minutes) antigen test will be the primary source for individual follow up testing.

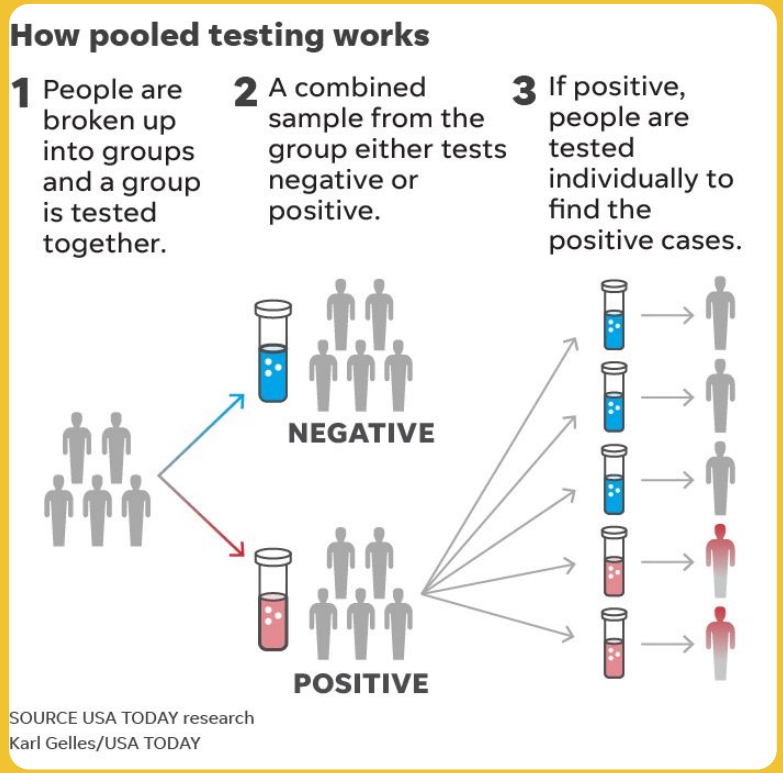
What is the difference between surveillance, screening, and diagnostic testing for COVID-19 testing?

Surveillance for COVID-19 includes ongoing systematic activities, including collection, analysis, and interpretation of health-related data, essential to planning, implementing, and evaluating public health practice. Surveillance testing is primarily used to gain information at a population level, rather than an individual level. Surveillance testing may be random sampling of a certain percentage of a specific population to monitor for increasing or decreasing prevalence and determining the population effect from community interventions such as social distancing.

Screening for COVID-19 is looking for occurrence at the individual level even if there is no individual reason to suspect infection such as a known exposure. This includes broad screening of asymptomatic individuals without known exposure with the intent of making individual decisions based on the test results.

Diagnostic testing for COVID-19 is also looking for occurrence at the individual level but is performed when there is a particular reason to suspect that an individual may be infected. Examples of diagnostic testing include testing symptomatic individuals presenting to their healthcare provider, testing individuals who indicate that they were exposed to an individual with a confirmed or suspected case of COVID-19, and testing all individuals present at an event where an attendee was later confirmed to have COVID-19.

How pooled testing works:



What is classroom pooling?
It's a method that combines test samples from all individuals in one classroom/group/cohort into one tube that's then tested.

How will pools be created?
Staff and students from the same building and cohort will be grouped together.

How are the samples collected?
Anterior nasal swab (short swab) - a swab of the front of the nostril.

- can be self-administered by adults and older children (under supervision)
- younger students can be administered by any trained school staff

HOW TO COLLECT YOUR ANTERIOR NASAL SWAB SAMPLE FOR COVID-19 TESTING

Follow the instructions included with your sample kit. Use **only** materials provided in your kit to collect and store your sample, unless the kit says to do otherwise. Use **only** an approved sample collection kit given to you by your healthcare provider or personnel at the testing center.

Initial set-up

1. Open the sampling kit.

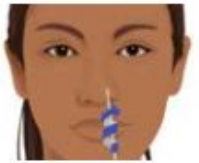
2. Apply hand sanitizer with at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.

Sample collection

3. Remove the swab from the container, being careful not to touch the soft end, which is the absorbent tip.

4. Insert the entire absorbent tip of the swab into your nostril, but do not insert the swab more than ¾ of an inch (1.5 cm) into your nose.

5. Slowly rotate the swab in a circular path against the inside of your nostril at least 4 times for a total of 15 seconds. Be sure to collect any nasal drainage that may be present on the swab.



6. Gently remove the swab.

7. Using the same swab, repeat steps 4-6 in your other nostril.

cdc.gov/coronavirus

Preparation of sample for return

8. Place the swab in the sterile tube and snap off the end of the swab at the break line. Place the cap on the tube.

9. Re-apply hand sanitizer.

10. Place the tube containing the swab in the biohazard bag provided and seal the bag.

Returning the sample and clean-up

11. Give the bag with the swab to testing personnel.

12. Throw away the remaining sample kit items.

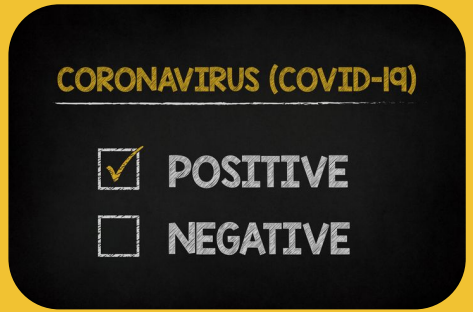
13. Re-apply hand sanitizer.

cdc.gov/coronavirus

What does a positive pool mean?

A positive result means that your sample or your child's sample is in a sub-pool of collected samples that tested positive for COVID-19. You will be notified in email to follow a set of instructions in order to proceed with reflex/follow up testing.

Individuals who test positive must self-isolate for 10 days AND until symptoms have improved AND at least 24 hours have passed without fever. Close contacts, including family members, will need to follow quarantine protocol. (according to CDC/MA DPH guidelines)



What does a positive pool mean? (cont.)

What if my (staff)/my child's diagnostic test result is negative?
You/your child can return to school as long they are without symptoms. There is the possibility that you might be notified that you/your child are a close contact with someone who tested positive.

Will my student be able to participate in hybrid classes via remote learning while under quarantine?
Yes. The Principal will be able to answer any additional questions regarding academic support during this period.

When can I return to school?
If the result of the diagnostic test is negative, you can return to school as long are you/your child is symptom-free. Individuals who test positive must self-isolate for 10 days AND until symptoms have improved AND at least 24 hours have passed without fever. Close contacts, including family members, will need to follow quarantine protocol. (according to CDC/MA DPH guidelines)

How is the data that I share kept confidential?
The results are reported through a secure, HIPAA compliant reporting platform.

Pooled Testing Initiative - DESE & DPH

- DESE and DPH are introducing COVID-19 screening testing using a pooled strategy in the school setting.
- During a 6 week early launch - (2/8/2021-3/28/2021), test kits, support from a testing service provider and testing software to track results will be provided to participating districts at no cost.
- Following the 6 week launch, districts may continue to use pooled testing by purchasing the tests and any other accompanying testing materials, software and support from a statewide contract.

Potential goals of a pooled testing program

Increases safety: primary benefit is to identify cases (including asymptomatic cases)

- Builds confidence and trust in safety of school buildings, staff and students, perhaps extending into the broader community
- Understand incidence in schools/town on an ongoing basis
- Encourage importance of safety measures among families out of school
- Prepare for and perhaps accelerate return to in person schooling - enhancing the education of our kids

Advantages/Potential Limitations

Advantages

- Secretary of Health and Human Services Marylou Sudders noted that COVID-19 pooled testing for students and teachers would result in a significant cost savings (~75%) as compared to the cost of an equivalent number of individual tests.
- Increases the number of individuals that can be tested using the same amount of resources as a single PCR test*
- Pool testing can identify and isolate asymptomatic carriers of the COVID-19 virus, thus enhancing the health and safety of the school community.
- Will allow us to minimize the presence of the COVID-19 virus in our schools and maximize our ability to remain open for in person instruction throughout the 2020-21 academic year.
- Provides an additional layer of response and mitigation for our community.

**diagnostic resources.*

Potential Limitations

- Specimen integrity can be affected by the quality of swab specimen collection, which could result in some swabs having limited amounts of viral genetic material for detection.
- Inadequate individual specimens, including those with limited amounts of viral genetic material, might not be eliminated from the pooled specimen before testing.
- Even if each individual specimen in a pool is adequate, the specimens in a pooled procedure are diluted, which could result in a low concentration of viral genetic material below the limit of detection.
- Securing additional staffing (to avoid contracted provider costs)
- Potential unanticipated delays (compromised specimens, technology, weather, etc..)

Statewide Contract & Included Services

Testing Service Provider

- Onboarding and continued training
- Operations & Logistics
  - Delivery of tests to schools
  - Testing hardware (tubes, labels, etc…)
- Lab processing
- Secure tech system
- Customer Support

Schools & Districts

- Coordination and direct administration of program
- Overseeing ongoing operations
- Conducting “follow up” tests on positive pools

District responsibilities

- Manage all testing logistics
  - Overseeing test administration
  - Data entry
  - Software management
- Administer the specimen collection to students and staff
- Administer any follow up testing with Abbott BinaxNOW (including reporting of results)
- Transport tests to laboratory for processing

Preconditions for Pooled Testing

- Obtain consent from individuals to be tested and to report follow-up test results to the Department of Public Health
- Follow-up testing
- Maintaining adequate supply of Personal Protective Equipment

Costs

- The following cost breakdown is estimated and based on current student enrollment and staffing levels. It considers full participation (some districts are reporting approximately 80% participation).
- Actual costs will be influenced by a variety of factors (e.g. rates of participation, strategic formulation of pools, assigned vendor, procurement of staff, etc…).

	DESCRIPTION	COST
ASSOCIATED COSTS (projected/estimated)	Set-up fee (one-time fee)	$500-$800 (covered by DESE – Early Launch
	Pooled Test Fee - 5-10 swabs (per pool)	$50
	Approximate # of pools collected each week (based on current student enrollment/staffing numbers given 100% consent)	130
	Total pooled test fee cost per week	**$6,500**
ADDITIONAL COSTS/ OVERHEAD	Administrative/Customer Support cost per week Customer support cost depends on vendor assigned	$60-$117 (avg.$88.50)
	Courier/Delivery of specimens to lab cost per week Estimate based on medical courier – 1 box/20lbs	$200 (estimated)
	Additional Staff cost per week (addl. nurse + 2 support staff)	$3,153
	Total Weekly Cost during 6-week early launch (2/8/2021-3/28/2021)	$3,153
	Total Cost during 6-week early launch (2/8/2021-3/28/2021)	$18,918
	Total Weekly Cost 11 weeks (3/29/2021-6/17/2021)	$9,941.50
	Total Cost for 11 weeks (3/29/2021-6/17/2021)	$109,356.50
	Total Weekly Cost for 17 weeks (2/8/2021-6/17/2021)	$7,545,55 (averaged)
	Total Cost for 17 weeks (2/8/2021-6/17/2021)	**$128,274.50**

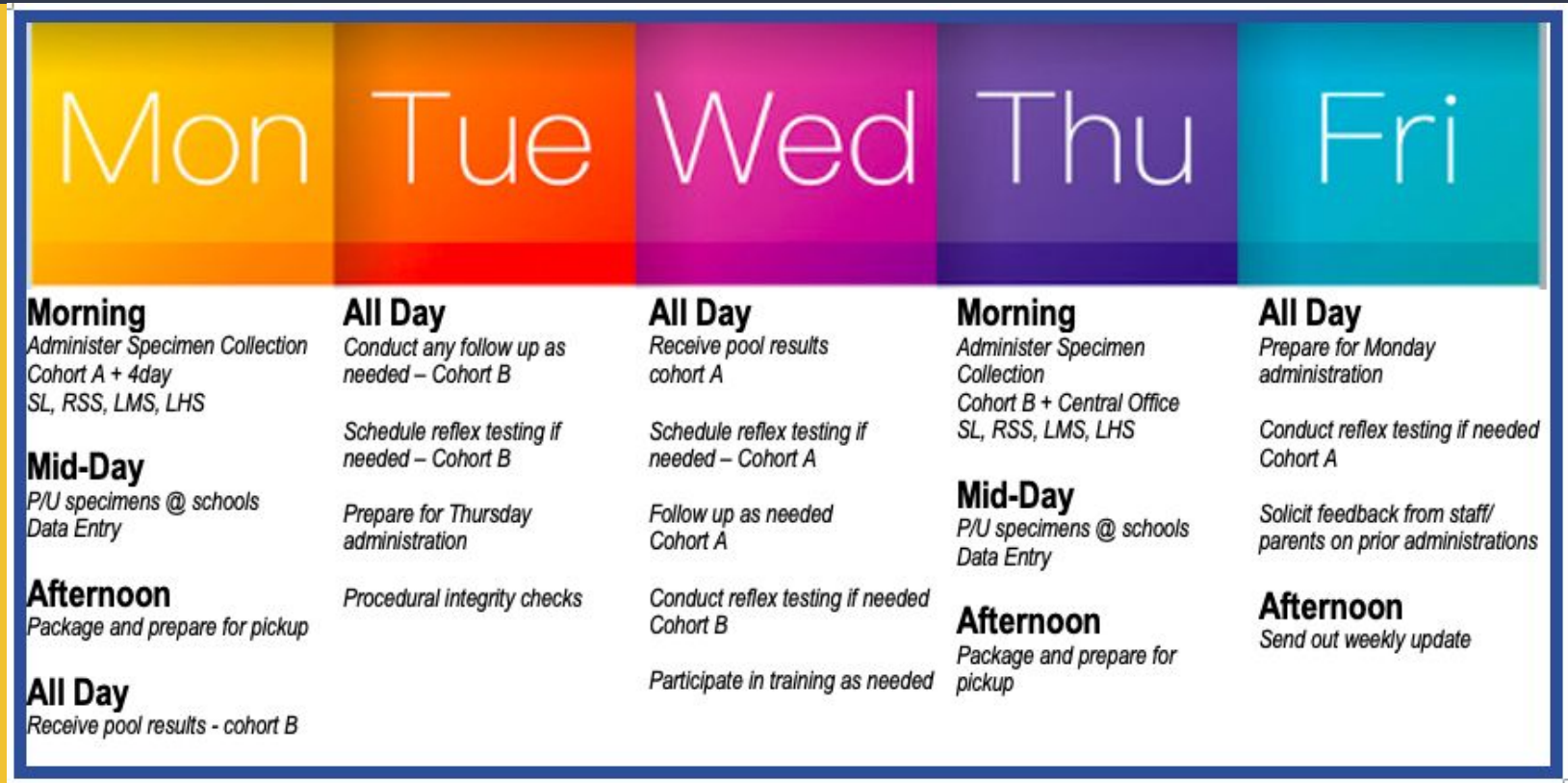
Cost Breakdown
Total Per Person

Total Eligible Participants
1187

100% Participation
$110

80% Participation
$135

Sample pool collection scenario - Weekly



STUDENT CONSENT FORM FOR OPTIONAL COVID-19 POOLED TESTING
TO BE COMPLETED BY PARENT / GUARDIAN

Parent/Guardian Information

You will be not be notified with pooled test results, but will be notified of individual follow up test results either via phone or email.

Parent/Guardian Print Name:	
Parent/Guardian Cell/Mobile #: *Note: results will be texted to this cell #*	
Parent/Guardian Email Address:	

Child/Student Information

Child/Student Print Name:			
Grade Level:		**Classroom** (if applicable):	
Date of Birth: *(MM/DD/YYYY)*		**Age:**	

Has the student listed above been diagnosed with COVID-19 in the past 90 days?:

☐ **Yes**, my student has tested positive for COVID-19 in the past 90 days.

If yes, list date of last positive COVID-19 test: _____

☐ **No**, my student has **not** tested positive for COVID-19 in the past 90 days.

CONSENT

By completing and submitting this form, I confirm that I am the appropriate parent, guardian, or legally authorized individual to provide consent and I attest to:

A. I authorize the collection and testing of a weekly pooled COVID-19 test on my child during school hours, in addition to any necessary individual diagnostic follow up tests on my student (including Abbott BinaxNOW rapid antigen tests and PCR/molecular tests). I understand that all sample types will be non-invasive, short nasal swabs.

B. I understand that pooled testing does not yield individual results for each member of a pool, and that the results of my student's individual results within a pooled test cannot be shared with me. However, I understand that my student's personal health information may be entered into the testing provider's technology platform to assist with tracking pooled testing and identifying individuals in need of follow up testing.

C. I understand that I will be notified about the results of any individual diagnostic "follow up" test for COVID-19 performed on my student.

D. I understand that there is the potential for a false positive or false negative COVID-19 test result for pooled or individual tests. Given the potential for a false negative, I understand that my student should continue to follow all COVID-19 safety guidance, including mask-wearing and social distancing, and follow school protocols for isolating and testing in the event the student develops symptoms of COVID-19.

E. I understand that staff administering pooled testing and follow up testing have received training on safe and proper test administration. I agree that neither the test admnistrator nor the Littleton Public Schools, nor any of its trustees, officers, employees, or organization sponsors are liable for any accident or injuries that may occur from participation in the pooled testing program.

F. I understand that my student **must** stay home if feeling unwell. I acknowledge that a positive individual follow up test result is an indication that my child, must stay home from school, self-isolate, and continue wearing a mask or face covering as directed in an effort to avoid infecting others.

G. I understand the school system is not acting as my child's medical provider, this testing does not replace treatment by my child's medical provider, and I assume complete and full responsibility to take appropriate action with regards to my child's test results. I agree I will seek medical advice, care and treatment from my child's medical provider if I have questions or concerns, or if their condition worsens. I understand I am financially responsible for any care my student receives from their healthcare provider.

H. I understand that follow-up testing will create protected health information (PHI) and other personally identifiable information of the student. Pursuant to 45 CFR 164.524(c)(3), I authorize and direct the testing company to transmit such PHI to my child's school, the Department of Public Health, the Department of Elementary and Secondary Education, and the testing provider. I further understand that PHI may be disclosed to the Executive Office of Health and Human Services and any other party, as authorized under HIPAA.

I. I understand that authorizing these COVID-19 tests for my student is optional and that I can refuse to give this authorization, in which case, my student will not be tested.

J. I understand that I can change my mind and cancel this permission at any time, but that such cancellation is forward-looking only, and will not affect information I already permitted to be released. To cancel this permission for COVID-19 testing, I need to contact 978-540-2500.

I, the undersigned, have been informed about the test purpose, procedures, possible benefits and risks, and I have received a copy of this Informed Consent. I have been given the opportunity to ask questions before I sign, and I have been told that I can ask additional questions at any time. I voluntarily agree to this testing for COVID-19 for my child.

Signature of Parent/ Guardian:		**Date:**

Example:
Student Consent Form

References

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AP Photo/Elaine Thompson