

# COVID-19 Pool Testing

## *Group Saliva Surveillance On-Campus Standard Operating Procedure*

### OVERVIEW & PURPOSE

The objective is to provide sensitive, accurate, and rapid feedback to college campuses about the presence of SARS-COV-2 in saliva samples from individuals on campuses. The following video may be helpful to share with students, faculty and staff:

<https://vimeo.com/454753759/71e98f83da>

### PERFORMANCE STANDARDS

1. Data are accurate.
2. Data are specific to each pool.
3. Data are produced in 24-48 hours after receipt of pools.

### OBJECTIVE: Collect and pool samples

- A local collection team should be able to receive up to 6,000 saliva samples (and create 500 pools) in a single day from campuses with site-based team using controlled access large group method (described below).
- Other methods can be applied as well, adopted for either door to door collection or small group collection in student living quarters, or drive-through collection method. It is up to the campus to determine the method that best meets their need for safe collection and verification of the identities of all individuals in the pools.

### MATERIALS NEEDED

Campus Provides:

1. Personnel at each site. Each collection station will need 4 personnel: 1 Greeter to screen students as they arrive, 2 Attendants to distribute saliva collection kits and receive completed collections; 1 for pooling samples (the Pooler). Each collection station is estimated to have processing capacity of 100+ individuals per hour

under ideal conditions. If the second attendant can facilitate two students concurrently, collection stations could achieve up to 200 individuals per hour.

2. Two tables for each collection station (one for materials to distribute to individuals being tested and one for pooling purposes)
3. Container of disinfecting lab wipes (1 per station)
4. PPE, including box of disposable paper gowns with cuffed sleeves, box of plastic gloves, N95 or fluid masks, and facial shield or goggles (3 each per station)
5. Several tables and chairs for individuals being tested to use near each collection station (spaced 10 feet apart)
6. Transportation container for pool bags of individual swabs
7. Large trash receptacles (1 per station) with bags and ties
8. Social distancing reminder marks and signs
9. Hand sanitizer stands

Upstate Medical University Provides:

1. Large instruction cards (5)
2. Barcoded swab kits (1 per student)
3. Labeled centrifuge pool collection tube (1 per pool)
4. Labeled collection bag (1 per pool) sufficient to hold 12 collection tubes
5. Tube rack to hold 12 samples and pool collection tube (the Collection Rack) (2 per station)
6. Tube rack to hold 96 full/closed pool collection tubes (the Pooled Rack) (1 per station)
7. Transportation container and lid for pool bags (each containing 12 empty collection tubes)
8. Transportation container and lid for pool collection tubes

## PROCEDURE

*[Note: For simplicity, the below procedures refer to all individuals being tested as students.]*

### *Advance procedures*

1. Students are informed of process ahead of time and must participate to be eligible for in-person class attendance.
2. School designates collection area ahead of time and provides personnel to direct pedestrian traffic to and from site and manage student behavior.
3. Students report to swab site location at specific time based on last names or ID numbers or other convention as determined by school.
4. Collection day is determined ahead of time for each campus based on SUNY processing lab reservation.

5. School provides Upstate with information on their campus physician.
6. Several days before testing, students are instructed to create a COVID-19 Surveillance Account and complete their profile ***at least two days before*** testing (<http://register.suny-covid.com/>).
7. Prior to the day of testing, students are instructed to bring an official college photo ID card and their personal mobile device to the collection station.
8. Prior to testing, students are instructed not to eat or drink anything, including chewing gum, mints or lozenges, within 30 minutes of reporting, and should not have brushed their teeth or used mouthwash within the past three hours. In addition, test subjects must abstain from smoking, vaping, or using smokeless tobacco products for 30 minutes prior to the test.
9. On the day of testing, students form into lines at their assigned collection stations, maintaining 6 feet distance (lines will be taped on floor and reminder signs posted).

#### *Collection Day Procedures*

*[These can be modified by individual campuses to use door to door collection in dorms or other appropriate means of obtaining swab samples, in consultation with SUNY Upstate]*

1. Masked staff don gloves prior students arriving. Pooler additionally dons gown, and faceshield. All staff should be wearing closed toe shoes.
2. Each student approaches Greeter station in turn and with student ID in one hand, and mobile device in other hand.
3. Greeter asks the student if they are currently experiencing any COVID-19 symptoms; if yes, the Greeter instructs the student to stop and report to their Student Health office for further evaluation.
4. Non-symptomatic students are asked to verify that they have not eaten or drank or brushed or used other prohibited substances as instructed. If they cannot verify this, they are asked to exit and return in an hour.
5. Greeter checks if the student has a student ID and mobile device. If not, they are told to come back with both.
6. Greeter checks to make sure the student has completed their profile in the COVID-19 SUNY Surveillance App. If the Greeter cannot verify this, the student is told to step aside and register before entering.
7. When prompted, student puts ID away and approaches Attendant #1.
8. Upon arriving at the assigned collection station, students use hand sanitizer.
9. Student launches their COVID-19 Surveillance Account using their own mobile device.

10. Student is prompted not to open saliva swab collection device, then handed the device.
11. Student enters the saliva collection kit barcode (double entry), linking it to themselves. Barcode entry should be completed while collection kit is still packaged.
12. Attendant 1 verifies the student has entered the correct barcode. To do this, student should read barcode from their mobile device, while Attendant 1 follows on the collection tube. If there are inconsistencies, student is asked to correct them before proceeding. **NOTE: Strict adherence to this procedure #12 is critically important.**
13. Attendant 1 prompts student to move to Attendant 2 with their collection swab.
14. Following the guidance of Attendant 2, and instructions provided on the saliva collection kit, student carefully opens the packaging, then collects saliva from mouth for 10-15 seconds. In order to achieve higher throughput, Attendant 2 can oversee two students at once during this process, if they are able to monitor effectively while maintaining proper social distancing.
15. Student tightly closes the tube, and shakes the tube vigorously 10x to mix with stabilizing reagent.
16. If collection is successful, student hands tube to Attendant 2. Using the student's ID as reference, Attendant 2 writes the student's full name and date of birth (DOB) on the tube, taking care not to write on the pre-printed barcode. The name and DOB should follow the following syntax:

**Last Name, First Name** (Note: must be the LEGAL first and last names)

**MM/DD/YY**

17. After writing the student's information on the collection tube, Attendant #2 should confirm the student's ID was entered correctly into the registration. This should be accomplished by Attendant 2 comparing the ID on the registration confirmation page with the student's physical ID. If the student does not have a physical ID yet, Attendant 2 should validate the ID in the app by checking syntax and validating from an external system. Any incorrect IDs must be corrected by the student before proceeding.
18. Once prompted by Attendant 2, student will finalize their registration. Otherwise if the collection was unsuccessful, the collection tube is discarded in the trash and student returns to Attendant 1's line.
19. Attendant 2 adds collection tube to Collection Rack; once 12 samples are in this rack, Pooler retrieves rack and transfers it to the pooling table.

20. For each of the 12 samples in the collection rack, Pooler twists opens the lid, squeezes the liquid from the swab by twisting it against the inside of the sample collection tube and then transfers the entire liquid contents from the collection tube to a secondary barcoded pool tube. **The swab should only be squeezed within the individual sample tube, NOT inside the pool tube.**
21. Pooler twists closed each original sample tube **tightly** and adds it to the labeled common pool collection bag.
22. Common pool tube stays in the collection rack until it has received samples from 12 students.
23. With the addition of the 12th sample, the pool tube is **sealed tightly** and the exterior of the pool tube is wiped with a disinfectant wipe.
24. Pooler verifies that the common pool tube and pool collection bag (which now contain 12 empty individual collection tubes) have the same label and places the common pool tube in the Pooled Rack; the pool collection bag (containing the 12 empty individual collection tubes) is set aside for transport to SUNY Upstate. **Care MUST be taken to ensure that each individual swab is tightly secured within its original tube, and that the pool tube itself is tightly closed.**
25. After each pool collection is complete, the Pooler changes gloves or uses a disinfecting wipe to vigorously clean their gloves before handling the next set of pool tubes.
26. Clean up collection site, remove PPE, wipe down face shield with a fresh disinfecting wipe, collect waste with double glove procedure.
27. After all pools are completed, pool tubes and pool collection bags (containing 12 empty saliva collection vials) are transported to SUNY Upstate processing lab. This must be done by 3 pm for results to be generated the next day, otherwise the data will be available within 2 days. Pool sample tubes must be kept out of direct sunlight and held at room temperature.

## LINKS TO INSTRUCTIONAL VIDEOS

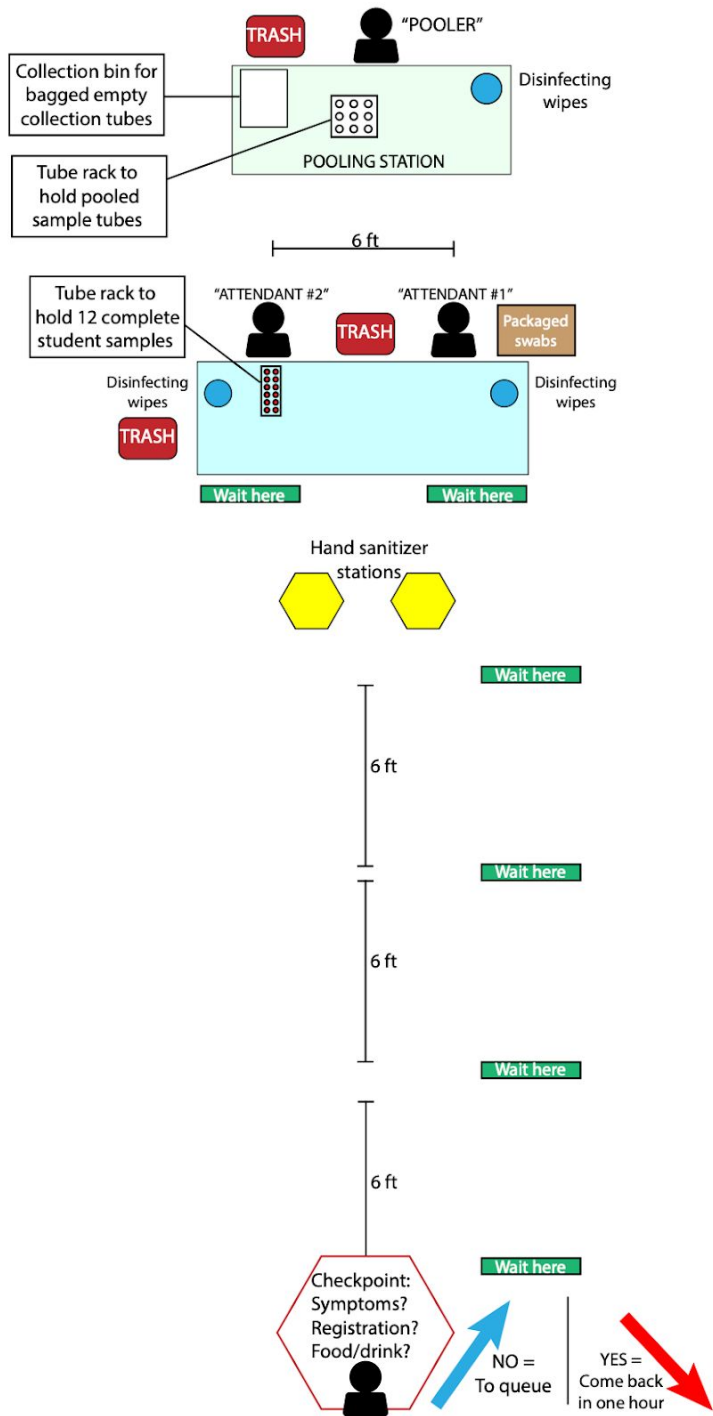
Swabbing Technique (students): <https://vimeo.com/447268833/5229da41b6>

Role of the Greeter and Attendants: <https://vimeo.com/447270240>

Role of the Pooler: <https://vimeo.com/447269539>

## ON-CAMPUS LAYOUT

The following diagram is an example of how a collection station can be set up:



Variations of this setup might include moving the Pooling Station to a separate room in order to achieve greater social distancing around the Attendant's Station.

## MAJOR CHANGES SINCE VERSION 1

- Each campus must provide information regarding their campus physician to allow Upstate to run reflex testing.
- The test subject registration process requires additional profile information to satisfy insurance obligations, and NY Department of Health reporting requirements. Due to the added length of registration, it is strongly recommended to further emphasize the need for day before registration.
- Attendant 2 must write the test subject's name and date of birth on the individual collection tube. The institutional ID, or written record of the test subject must be used for reference to ensure accuracy of the written information.