Background

As Ohio’s two-year colleges and four-year colleges and universities (campuses) finalize decisions about how to re-open, this document is designed to provide guidance on COVID-19 testing strategies for students, faculty, and staff members. The general principles outlined in this document are designed to be shared with the leadership of public and private campuses in Ohio to facilitate the development of a testing strategy tailored to the unique characteristics and resources of each campus.

On June 30, 2020, the U.S. Centers for Disease Control and Prevention released a set of guidelines entitled “Interim Considerations for Institutions of Higher Education.” This document offers considerations for ways in which campuses can help protect students, faculty, and staff, and slow the spread of the coronavirus disease 2019 (COVID-19), including testing. Testing to diagnose COVID-19 is one component of a comprehensive strategy and should be used in conjunction with promoting behaviors that reduce spread, maintaining healthy environments, maintaining healthy operations, and preparing for when someone gets sick.

Core Principles

1. Each campus must develop policies and procedures related to COVID-19 testing and the quarantine/isolation for symptomatic students, faculty, and staff members that meet the unique characteristics of the organization. The most critical success factor for the sustained re-opening of campuses this fall with regard to testing will be the rapid testing of students, faculty, or staff members who become symptomatic. This testing for symptomatic individuals should take priority over all other testing tactics.

   • Thus, all campuses should have a formal plan for the testing and isolation/quarantine of symptomatic members of their campus community. (Note: isolation is the term used for symptomatic/positive individuals; quarantine is the term used for asymptomatic individuals who have been exposed to someone who is symptomatic/positive.)
     
     » Testing should be completed within 24 hours of the individual becoming symptomatic – preferably within the same day when the individual develops symptoms.
     
     » Only COVID-19 viral testing is recommended at this time for symptomatic patients. We are not recommending antibody testing for symptomatic individuals, because it is not yet known if people can be infected with the virus more than once.
     
     » Campus policies should delineate which individuals may be tested through the campus-affiliated testing program – for example, can faculty and staff members be tested through the student health center, or should those individuals seek testing only through their primary care physician or a local hospital if they become symptomatic?
• It is recommended that each campus either designate university housing space to be set aside or secure local hotel space to be left empty so that it may be used to rapidly relocate individuals who live in residence halls, fraternities/sororities, or other institutional-affiliated housing who become symptomatic.

  » Symptomatic individuals could also be permitted to return home to self-isolate until their test result is returned, if that can be done safely.

  » For those students who do not reside in institutional-affiliated housing or for faculty/staff members, these individuals can shelter in place at their residence and avoid close contact with other individuals until their test result is returned.

  » It will be critical that symptomatic individuals not participate in class, work, or other campus community activities until their test results are available.

• Routine and rapid contact tracing for symptomatic individuals with high probability of COVID-19 even prior to the test result being returned may also be helpful.

  » The details for this tracing will need to be managed between the local public health authority and the campus’ designated healthcare provider. Institutions doing internal contact tracing will need to coordinate closely with their local public health authority.

  » Even while the COVID-19 test is pending, the symptomatic individual’s close contacts (defined as prolonged contact within six feet in an enclosed space) who live in campus-affiliated housing may also need to be relocated to the campus’ designated housing previously set aside in order to facilitate their self-quarantine.

  » These close contacts should quarantine until either the symptomatic individual’s test is negative or for 14 days if the individual’s test is positive.

  » If the symptomatic individual tests positive, based on the extent of contact, some very close contacts (e.g., roommates, intimate partners, etc.) who are asymptomatic may also need tested to determine if they are an asymptomatic positive.

  » The option for distance education and work from home will be critical for these individuals who become symptomatic or who need to self-quarantine.

• A second approach to testing that is not required for re-populating campus, but may be helpful in some settings, is voluntary, surveillance COVID-19 testing of a small cohorts of campus community members throughout the academic year. This may be especially helpful at those institutions with on-campus student housing. The goal would be to test a small percentage of asymptomatic individuals from across each campus on a weekly or monthly basis to assess the prevalence of the disease within the campus community. The specific individuals to be tested each interval could be selected based on the pattern of positive cases seen across the campus (e.g., selected from within a specific dorm, office building or academic discipline where there have been positive cases).
2. Each campus must identify how it will fulfill the critical elements needed to conduct COVID-19 testing within the institution. These elements include both 1) a plan for specimen collection, and 2) identification of a test processing partner.

a. Specimen collection

The first step in the process is to identify how, where, and by whom specimens will be collected at the campus. The three main methods of collecting specimens are outlined below. The methods differ based on the quality of specimen collected, the need for staffing, the requirements for personal protective equipment (PPE), as well as the risks to the patient of side effects or complications.

Each campus should have a well-defined plan of how it will fulfill these key elements related to specimen collection:

- Source for swabs
- Source for test tubes
- Staff to perform/oversee a swab site
- Safe location for a swab site
- PPE to facilitate the safety of swab staff

There are three typical methods of collecting a specimen for COVID-19:

- **Nasopharyngeal swab**: These specimens are collected with a specialized swab through the nose reaching all the way to the back of the throat.
  - This is the most effective swabbing mechanism in terms of getting the highest viral load per specimen.
  - Staff collecting these specimens need to wear specialized PPE include gloves, gown, goggles/eye cover, and an N-95 mask because this is considered an aerosol generating procedure (AGP).
  - There is a risk of discomfort/irritation from retrieving this sample and a small risk of a nosebleed.

- **Oropharyngeal swab**: These specimens are collected with a specialized swab through the mouth and to the back of throat.
  - This method is thought to collect a lower viral load per specimen than nasopharyngeal specimens.
  - Staff collecting these specimens need to wear specialized PPE including gloves, gown, goggles/eye cover, and a routine isolation/surgical mask.
  - There is minor irritation from retrieving this sample, to a lesser degree than with a nasopharyngeal sample.

- **Anterior nasal swab**: These specimens are collected with a specialized swab inserted by the patient into the front portion of the nose only.
  - This method is at risk of collecting a lower viral load per specimen if not conducted correctly.
  - Even though these swabs are meant to be used by the patient to swab themselves, from time to time, staff need to assist the patient with collecting the specimen, so staff should be outfitted with specialized PPE include gloves, goggles/eye cover, and a routine isolation/surgical mask.
  - There is little irritation to the patient with this method of sample collection.
b. **Test processing partner**

Each campus must either develop the ability to process COVID-19 tests internal to the organization or identify an outside partner to process these tests. These decisions should be finalized well in advance of the beginning of the fall 2020 academic term.

If done internally within the campus, through either:

- PCR viral testing – used for either symptomatic or asymptomatic patients (this testing is typically done only in a hospital/medical center clinical laboratory)
- Abbott rapid screening test – used only for symptomatic patients (this is done using the same Abbott equipment that is used for rapid influenza testing that may be located in a student health center or urgent care facility)

If done externally, the test-processing vendor could be a local hospital, a regional hospital reference lab, or a commercial laboratory. If an external partner is needed, a contract should be in place well in advance of the beginning of the fall 2020 academic term to ensure the success of the campus’ COVID-19 control program.

In order to guarantee an efficient process for specimen collection and test processing, there are numerous logistical issues that a campus will need resolve prior to reopening:

- **Internal process:**
  - Sufficient number of testing machines
  - Sufficient number of trained staff available to run tests
  - Sufficient number of test kits/reagent to run tests

- **External vendor:**
  - Contract in place if using external vendor
  - Process to deliver specimen to the lab