



COVID-19

TESTING

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Virginia Tech COVID-19 Testing

Building on the diagnostic and surveillance testing efforts outlined in the Virginia Tech Testing, Tracing, and Case Management plan, the following strategy provides for ongoing surveillance of the student and high contact populations. The public health measures in place on campus, including physical distancing and wearing of face coverings, are intended to help lower the strength of transmission, and given widespread compliance, should reduce the intensity of outbreaks within the student population. In recent work by Yale researchers, Chang et al. (July 2020 pre-print) reviewed several testing scenarios that demonstrated more frequent testing of the student population could improve infection control by early identification and isolation, interrupting the transmission and providing descriptive statistics when outbreaks do occur. Based on a dynamic transmission model, the research incorporates frequency of testing, sensitivity and specificity of the test, and result reporting and isolation delays. An ongoing surveillance program will capture students (on and off campus) as well as high contact individuals that have an increased risk of exposure due to their job or academic responsibilities.

While a rigorous surveillance program will not prevent outbreaks from happening, it is another mechanism for monitoring the health of the Virginia Tech campus and providing the metrics to inform operational decisions. Categories previously identified in the Testing, Tracing, and Case Management Plan for priority testing within the Virginia Tech population include the initial testing of residential students upon their return to campus, testing of individuals who exhibit symptoms of COVID-19, and individuals who have been identified through Virginia Department of Health (VDH) contact-tracing as having had close contact with someone who has lab-confirmed COVID-19 or who was diagnosed with COVID-19. Testing of students who are symptomatic or close contacts will continue through Schiffert Health Center (SHC).

Prevalence testing of the Virginia Tech student population, as well as surveillance of high contact individuals, will continue throughout the fall semester through an ongoing testing clinic organized by SHC. The number of tests performed daily will be determined by the analytical capacity of the Fralin Biomedical Research Institute (FBRI) Molecular Diagnostic Lab. The lab has been engaged in the analysis of samples collected through Virginia Tech's Schiffert Health Center (SHC) diagnostic testing, as well as the return-to-campus testing clinic for residential students. The plan remains dynamic and will be adjusted or modified based on the availability of new testing modalities and lab capacity.

The testing program will focus on several categories:

- High Contact (Risk-Based Exposure)– Testing of individuals who, due to the nature of their job or academic responsibilities, are in close contact with or have a higher interaction with the public or each other. These groups often cannot maintain physical distancing (within 6 feet for more than 15 minutes) to mitigate spread of the virus. Mandatory testing of high contact students and employees will occur through the surveillance testing clinic. The frequency and number of these tests will be a function of the overall testing capacity, with a goal of testing the entire population (~1,100 individuals) every two to three weeks (~110/day).
- Prevalence – Ongoing testing of the student population will occur throughout the fall semester to monitor the prevalence of COVID-19 within the campus community. Participation in

prevalence testing is mandatory for both residential and off-campus students. Enrolled students who do not reside in Blacksburg are not included in this program. The frequency and number of these tests will be a function of the overall testing capacity; testing will occur through the testing clinic organized by SHC.

- Student Athletes – Student athletes will follow the ACC guidelines for sport-dependent testing frequency (Table 2).
- Walk-in testing – In addition to the scheduled high-contact and prevalence testing, the testing clinic will provide walk-in testing on specific days for asymptomatic students and employees that are not included in another testing program.

TESTING PROGRAMS

As part of the Virginia Tech Testing, Tracing, and Case Management Plan, testing throughout the fall semester will include surveillance of individuals (employee and students) who are identified as belonging to an elevated risk, or “high contact” group (Table 1), prevalence testing of the Blacksburg student population, and surveillance of student athletes (Table 2).

HIGH CONTACT SURVEILLANCE TESTING

Based on the exposure risk levels described in the Department of Labor and Industry (DOLI) Emergency Temporary Standard §16 VAC 25-220 (adopted 15 July, 2020; effective 27 July, 2020), Virginia Tech Human Resources has established guidelines for high contact surveillance testing. This includes individuals who, due to the nature of their job or academic responsibilities, may consistently be less than 6’ apart for longer than 15 minutes (with or without PPE), and/or where administrative controls to reduce risk are not possible, or have a higher interaction with the public. The following categories, and the positions identified within each that are applicable to Virginia Tech, may be considered to have a higher chance of exposure to and transmission of COVID-19. Individuals in these positions will be required to participate in periodic testing for high contact groups through the surveillance testing clinic.

Approximately 1,100 individuals have been identified as Very High, High and Medium risk-based exposure groups, the majority falling within the Medium category. Mandatory surveillance testing will include both employees (faculty/staff/wage), and students within these groups, as capacity allows.

VERY HIGH

This category includes positions with job tasks that have a high potential for exposure to known or suspected sources of the SARS-CoV-2 virus. This includes individuals involved in the collection or handling of specimens from a patient or person known or suspected to be infected with the SARS-CoV-2 virus (e.g., manipulating cultures from patients known or suspected to be infected with the SARS-CoV-2 virus). This category also includes those involved with aerosol-generating procedures (e.g., invasive specimen collection) on a patient or person known or suspected to be infected with the SARS-CoV-2 virus.

Positions within Virginia Tech that fall into the “very high” category include medical staff at Schiffert Health Center and Athletics medical staff involved with sample collection and exams on individuals suspected to be ill with COVID-19, and those working in the Fralin Biomedical Research Institute (FBRI) Molecular Diagnostics Lab.

HIGH

This category includes positions with job tasks that have a high potential for exposure inside six feet with known or suspected sources of SARS-CoV-2, or with persons known or suspected to be infected with the SARS-CoV-2 virus that are not otherwise classified as very high exposure risk. This includes individuals involved in healthcare delivery, care, and support services, wellness services, non-medical support services, physical assistance, etc., provided to a patient, or other person known or suspected to be infected with the SARS-CoV-2 virus involving skilled nursing services, or COVID-19 testing services. In addition, this includes first responder services (including medical transport services) provided to a patient, resident, or other person known or suspected to be infected with the SARS-CoV-2 virus.

Positions within Virginia Tech that fall into the “high” category include members of the Virginia Tech Rescue Squad (VTRS), Athletics Trainers, Cook Counseling staff involved in face-to-face counseling, employees in New Hall West (Isolation dorm), the EHS Occupational Health Clinic, and clinical students and staff at VTCSOM.

MEDIUM-HIGH

Positions that require more than minimal contact inside six feet with other employees or students, or the general public who may be infected with SARS-CoV-2, but who are not known or suspected to be infected with the SARSCoV-2 virus. This includes on campus educational settings in schools, colleges, and universities where administrative controls or physical distancing may not be possible; daycare and afterschool settings; restaurants or dining facilities; indoor and outdoor construction settings; veterinary settings; venues for sports and other forms of mass gatherings; fitness, gym, and exercise facilities.

Positions within Virginia Tech that fall into the “medium-high” category include those Adult/Child Day Services (care/education), Virginia Tech Police Department (VTPD) officers with face-to-face interaction with the public or campus community, Athletics staff, dining services, housekeeping staff and mail services.

MEDIUM

Positions that require more than minimal (but less than the MEDIUM-HIGH groups) occupational contact inside six feet with other employees, other persons, or the general public who may be infected with SARS-CoV-2, but who are not known or suspected to be infected with the SARSCoV-2 virus.

Positions within Virginia Tech that fall into the “medium” category include in-person classes and labs where physical distancing or administrative controls are not possible, receptionists that interact with the public (no administrative controls, but PPE), College of Veterinary Medicine faculty, staff, and students involved in clinical services and education, staff involved with cleaning and managing gyms and exercise facilities, individuals involved in certain human subjects research, construction sites, parking attendants, and building maintenance staff.

LOW

Positions with job tasks that are not otherwise classified as very high, high, or medium exposure risk that do not require contact inside six feet with persons known to be, or suspected of being, or who may be infected with SARS-CoV-2. This includes areas with administrative controls, such as the installation of floor to ceiling physical barriers constructed of impermeable material and not subject to unintentional displacement; the ability to work remotely; or staggered work shifts that allow employees to maintain physical distancing from other employees, other persons, and the general public.

Positions within Virginia Tech that fall into the “low” category include telework in all departments.

Table 1. Summary of High Contact Groups participating in surveillance testing

VERY HIGH	
Schiffert Health Center	FBRI Molecular Diagnostics Lab
Athletics Medical Staff	
HIGH	
Virginia Tech Rescue Squad	Isolation Facility Employees (New Hall West)
Cook Counseling	Virginia Tech Carilion School of Medicine
EHS Occupational Health Clinic	Athletics Trainers
MEDIUM-HIGH	
Adult/Child Day Services (care/education)	Athletics (e.g., Coaches)
Housekeeping	Dining Services
Virginia Tech Police Department	Mail Services
MEDIUM (<i>potential for expanded testing</i>)	
Individuals involved with Human Subjects Research	Rec Sports

HIGH CONTACT TESTING IMPLEMENTATION

As employees and students are identified as potential “high contact”, they will be enrolled in periodic surveillance testing through the testing clinic, as capacity allows. Testing of symptomatic individuals and those identified through Virginia Department of Health (VDH) contact tracing efforts will take priority, and as these volumes fluctuate, and capacity allows, the interval for surveillance testing may change. *If an individual is presenting symptoms, and concerned they may be ill with COVID-19, they should contact their healthcare provider for assessment and further guidance.*

High contact groups will be required to participate in periodic testing, provided at no charge. *Supervisors and managers shall accommodate testing as part of time-worked for those in high contact roles.*

High contact surveillance will begin with testing those in the Very High and High categories, and will ramp up to include those identified in the Very High, High, and Medium-High categories. As capacity allows, testing may expand to include additional groups in the Medium category.

INVITATION FOR HIGH CONTACT TESTING

The Schiffert Health Center (SHC) Clinic Administrator will coordinate with the Human Resource (HR) Directors/Leaders for notification and scheduling of high contact employees (including student employees) for testing (sample collection). Specific dates and times for sample collection will be identified for each high contact group. Once an individual has been identified as part of a high contact

group, they will receive a letter from their HR contact notifying them of their status and providing additional information on the surveillance program. The Clinic Administrator will send a notification by email to the appropriate HR contact, who will then have the responsibility of communicating with the employee.

Students who are not student employees, but have been identified as belonging to one of the high contact groups included in the surveillance program, will be contacted by the SHC Clinic Administrator regarding their status and to provide more information about the program. The student will also receive a notification by email.

The initial notification will include a link to the online scheduling program, contact information, health check requirements, and an acknowledgement of consent form. The SHC Clinic Administrator will serve as the primary contact for questions (540-231-3368, jihotter@vt.edu). When available capacity for testing is confirmed, the HR contacts (employees) or the Clinic Administrator (students) will coordinate scheduling. Individuals will have the option to sign-up for their appointment time via phone (540-231-3368) or through the link provided in their invitation email. The interval for testing may fluctuate depending on capacity, with a goal of once every two to three weeks.

ADDING HIGH CONTACT INDIVIDUALS

Individuals who are not identified in these groups and who believe they are in a “high contact” position or have an increased level of risk due to their job or academic responsibilities, should contact Hokie Wellness at 231-4600. A representative from Hokie Wellness will ask a series of questions to determine whether an individual may be eligible for surveillance testing. These questions include:

- Are you in a role where you have regular contact with others within 6 feet?
 - If so, do these encounters typically last more than 15 minutes?
- What other factors may be part of your on-site work that would make you a high contact employee?
- What environmental protective measures are in place? What personal protective measures are you taking?
 - Examples of protective measures includes:
 - Physical distancing
 - Plexiglas
 - Double stacked tables
 - Utilizing offices rather than cubicles
 - Usage of mask/face shield
 - Floor signage
 - Re-configuration of space

Based on the information provided by the individual, a decision will be made as to whether or not inclusion in “high contact” surveillance testing is warranted. Hokie Wellness and/or a consulting team of representatives from Environmental Health and Safety (EHS) Occupational Health, Human Resources Employee Relations, Schiffert Health Center (SHC) and Virginia Tech Emergency Management, will make this determination on a case-by-case basis. The SHC Clinic Administrator will then add names to the database as appropriate.

PREVALENCE TESTING

In addition to testing of individuals identified as part of a high contact group, prevalence testing of the student population will continue throughout the fall semester. Following the same procedure as high contact surveillance, the SHC Clinic Administrator will coordinate prevalence testing. If selected for prevalence testing, a student will receive an e-mail and/or notification requiring that they schedule a testing date/time. They will be required to complete the test by the end of the following week.

The initial e-mail will include a link to the online scheduling program, contact information, health check requirements, and an acknowledgement of consent form. The SHC Clinic Administrator will serve as the primary contact for questions (540-231-3368, jihotter@vt.edu).

STUDENT-ATHLETES SURVEILLANCE TESTING

Following ACC guidelines, student-athletes will participate in ongoing surveillance according to the risk associated with each sport (Table 2). The SHC Clinic Administrator will coordinate ongoing surveillance of student-athletes through the Sports Medicine team. Student-athletes that test positive for COVID-19 will be notified by SHC; notification will also go the Virginia Tech Athletics Chief Medical Officer.

Table 2. Virginia Tech Athletics Tiers for Testing Student Athletes

HIGH RISK – WEEKLY TESTING	
Basketball (M/W)	Football
Lacrosse	Soccer (M/W)
Wrestling	Volleyball
MEDIUM RISK – EVERY OTHER WEEK TESTING	
Baseball	Cross Country
Softball	
LOW RISK – SYMPTOMATIC TESTING ONLY	
Track & Field (M/W)	Golf (M/W)
Swimming/Diving	Tennis (M/W)
Spirit	

REPORTING AND NOTIFICATION

Positive test results for COVID-19 will be reported to the Virginia Department of Health (VDH) in accordance with applicable law and the Board of Health Regulations for Disease Reporting and Control. As the healthcare provider coordinating the testing program, SHC will notify the VDH to coordinate contact-tracing and provide additional information as requested. All close contact information should be provided to the VDH contact tracers. Employees should also report known university contacts to the Case Management Team (via the Occupational Health Nurse, 540-231-8733, reportacase@vt.edu) to assist the team in determining if there are any additional actions needed by the university.

The SHC Clinic Administrator will report positive COVID-19 test results through the university case management system. Students who have tested positive through the ongoing testing clinic will be notified by SHC, and will be contacted by the Dean of Students to provide additional support. Employees who have tested positive will be contacted by the EHS Occupational Health Nurse for notification and to provide additional support. Employees are required to notify their supervisor if they must miss work due to illness, so that work schedules and leave can be determined. Return to work dates will be determined

by the supervisor, employee, and Human Resources, based on guidance from the VDH. Following the identification of a positive case, in accordance with the DOLI Emergency Temporary Standard (§16 VAC 25-220), the Case Management Team will provide a letter to the Senior Management Area and HR contact to provide for notification of employees.

ADDITIONAL RESOURCES

Chang, Joseph T., Crawford, Forrest W., and Edward H. Kaplan. (2020). Repeat SARS-CoV-2 Testing Models for Residential College Populations. (pre-print, has not been peer reviewed). Retrieved from: <https://www.medrxiv.org/content/10.1101/2020.07.09.20149351v2>.