

COVID-19 Public Health Management Planning for a Return to Campus

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COVID Testing: Operations

- Current and Near-term Capability – May/June
 - Nasal Swab PCR processed by Broad Institute
 - Current: Two “swabbers” in tent adjacent to E23
 - Manual process for appointments and check-in through MIT Medical’s EMR
 - Max throughput ~ 300/day
 - June: Four-six “swabbers” within Plexiglass enclosure in trailer adjacent to E23 (decreases PPE use for testing)
 - Highly automated check-in (< 30 seconds per test)
 - Max throughput ~1,000/day



COVID Testing: Looking Forward

- Testing for Current Infection – PCR
 - Broad is working to validate saliva testing, considering buccal (cheek) swab also
 - In the future, may be able to move to observed self-collection, or fully remote
- Testing for Current Infection – Antigen
 - Similar to in-office rapid strep test; E25Bio (Lee Gehrke) has EUA application pending
 - Nasal swab specimen; looks for particular proteins from the virus
 - Much less expensive and rapid turnaround time
- Testing for Prior Infection - Antibody
 - Blood test – requires blood draw or finger stick
 - Concerns over reliability with current versions – false positives
 - Not clinically useful at this time – but may be in the future
 - At large scale, only viable modality is finger stick



Planning for Return to Campus

- Return-to-Campus PCR testing for students, faculty, staff with surveillance testing thereafter
- Surveillance testing strategy under development
 - MIT Medical can collect up to 5,000 tests per week – need to allocate these tests strategically until more testing capability is available
 - Sampling strategy considerations: increased testing for those in high-risk roles (e.g., first responders, those whose work cannot be safely de-densified), those who have increased health risk (e.g., age or living with an immunocompromised individual), and those with increased risk of spread to many (e.g., congregate living situations like residence halls), and random sampling of the rest of the population
 - We are working with Peko Hosoi/IDSS to model test allocation strategies
 - The testing strategy will likely evolve as new modalities become available
- Contact tracing by MIT Medical staff will continue; may need to augment this with additional personnel or training of others in community (e.g., athletic trainers, residential life staff, MedLinks); we are also evaluating enabling technology



Other Considerations

- Surveillance testing is most valuable when there is high participation
 - Opt-out rates >33% renders surveillance ineffective in controlling spread
 - Will require strong and coordinated messaging
- Quarantine/isolation capability for on-campus residents will be required
 - With large on-campus population, potential need >100 beds
 - Single location preferred for operational simplicity
 - Approach enhanced by presence of small (<10 bed) on-site observation area
- Will need to maximize the number of people in the community who receive a flu vaccine this fall; discussions underway around how best to do this



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so MIT can build a better world.