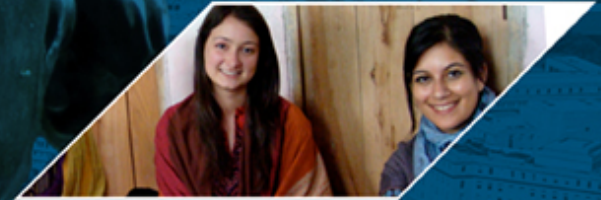


Public Health Surveillance to Control COVID-19 on Campus: Presentation to the Faculty Senate



Milken Institute School
of Public Health

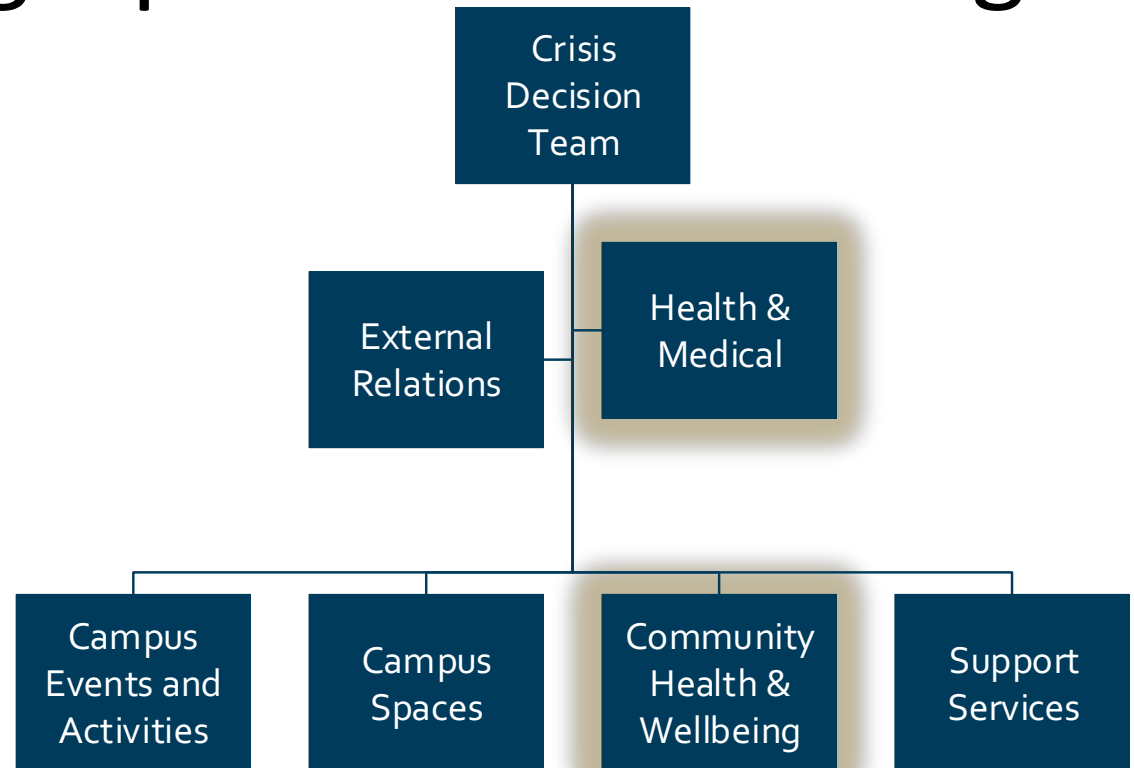
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This presentation:

- Will cover:
 - Virus and antibody testing
 - Quarantine and Isolation
 - Contact tracing
- Will not cover:
 - Student housing issues
 - Use of public areas on campus
 - Student dining
 - Student athletes

GW Reopening Operational Planning

- Committees
 - Structure
 - Representation
- “Extreme ownership”
- Status



GWU population characteristics

- Students at high risk for respiratory viral disease transmission.
- Up to 30,000 faculty/staff students; students from across the US and the world
- Faculty and staff are at high risk for worst consequences of COVID-19
- Young people are increasingly becoming infected in other parts of the US
- Immunity in community is likely to be low/ineffective
- ~45% of COVID-19 is transmitted FROM people who are asymptomatic, presymptomatic or do not think they have symptoms.

Important considerations



Strategy will be informed by risk. Recommended metrics include virus prevalence and transmission as well as resource availability



Testing and followup should be implemented in concert with social distancing, PPE, masks and symptom monitoring



Extensive attention should be paid to individual privacy, HIPAA, health reporting requirements and other legal concerns.



Members of the community should be able to opt out based on medical and possibly other considerations.

COVID-19 PCR Testing Overview

- **Goal:** Identify acute infections early on and assess the prevalence of COVID-19 among the university community at any point in time.
- **Scope:** Mandatory* viral testing for all on-campus students, faculty, and staff.
- **Population**
 - All, on-campus students, faculty, and staff, including contractor populations*
 - Excludes SMHS students and the MFA
- **Testing cadence**
 - Upon arrival
 - 3-5 days later
 - Periodically

Choice of Test

- SARS-CoV-2 Viral Nucleic Acid analysis (PCR)
 - Laboratory based test method -- not commercial kits
 - Assures supply chain and turnaround within 24 hours (unlike commercial lab kits)
 - Far more sensitive and specific than most commercial kits and much more so than Point of Care tests

1. Starting the Semester COVID-free (almost)

- Viral testing to start the school year as virus-free as possible and track the prevalence of COVID-19 among the campus community.
- Two time points
 - All on-campus students, faculty, and staff to be tested upon arrival to campus for both the virus and for immunity.
 - All to be retested one week later to pick up cases that develop as a result of starting the semester
- *Can we find out about prevalence earlier?*
 - *Evaluating viral prevalence by zip code for students*
 - *Could request submission of tests from public health or private MDs*
- *Possibility of initial quarantine for all, all from high prevalence areas, etc.*

2. Possible Periodic Surveillance Virus Testing Cadence

- Group 1: Undergrads and people who teach and spend time with them: weekly
- Group 2: Faculty, grad students and staff on campus not in Group 1: monthly
- Should provide adequate coverage for nearly all areas within the campus
- Can increase cadence of testing in higher risk areas or among higher risk groups.
 - Example: Student athletes may be tested more frequently.
 - Example: People on campus with underlying conditions may be able to opt in to Group 1

Symptom Monitoring & Symptomatic Testing

- Daily Monitoring
 - Members of the campus community will be asked to daily monitor symptoms and temperature
 - Propose to use a module from Point and Click EHR (PNC) for self monitoring
- Symptomatic Clinical and Testing Follow-up
 - Individuals with symptoms consistent with COVID19 infection will be contacted to:
 - Make telehealth appt with applicable team (Occupational Health or Student Health): 24 hours
 - Make symptomatic testing appointment (GWU PHL): 24 hours

COVID-19 Antibody Test

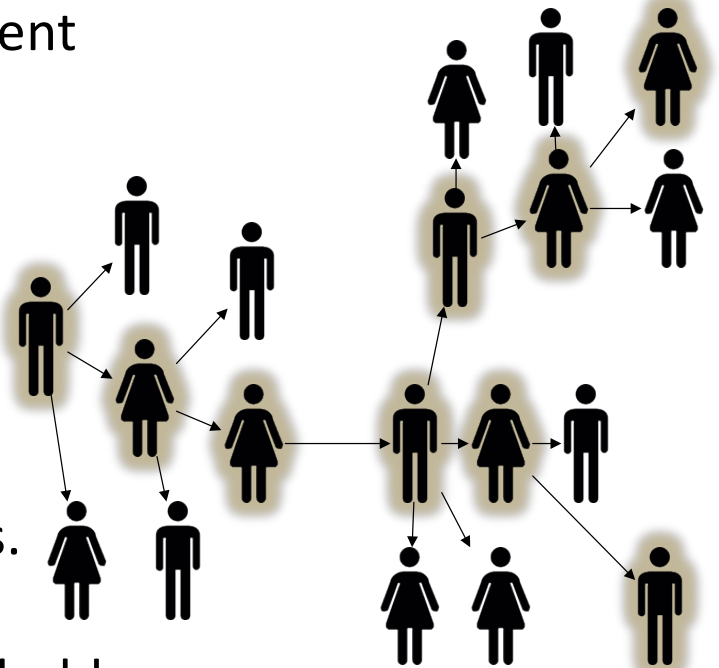
- **Goal:** Antibody testing to monitor COVID-19 exposures among the community and a measure of total virus exposure in the community over the semester.
- **Scope:** The antibody test will be offered to all but not mandated
- **Population:** Plan to test all students, faculty, and staff for immunity after arrival to campus and at the end of the semester.
 - Antibody results will be returned to the individual after both tests were performed.
 - Communication about antibody tests will clarify that we don't yet know which antibodies nor what levels of antibodies can inactivate the virus.
- **Metric:** Change in antibody prevalence over the semester will inform us of total transmission

Laboratory and testing information

- All PCR and antibody testing performed by GWU Public Health Laboratory, a CLIA high-complexity lab.
- Lab is responsible for ordering tests and creating testing kits, in addition to analysis.
- **PCR:**
 - Capacity = 7500 pooled tests per day
 - Efficiency: Surveillance tests will use mini-pools of 5, positive pools confirmed individually by 2 orthogonal tests.
 - Flexibility: Multiple specimen types in multiple transport media. Multiple assays (CDC, WHO, Pasteur), master mixes.
- **Antibody**
 - No pooling; Capacity = 1500 tests per day
 - ELISA (IgG) targeting anti-SARS-CoV receptor binding domain IgG
- **Costs**
 - Free of charge

Case Followup Overview

- **Goal:** Ensure the rapid response to and containment of infection on campus
- **Scope:** Case followup and contact tracing by DC Health for all positive cases within the GW community through the Campus Case Support Team (CCST). Referral and coordination of cases with Student, Occupational Health and DC Health, as well as support services.
- **Status:** Hiring CCST staff, determining data flow and capture systems, and coordinating with stakeholders



Data Integration

- Data integration will allow for the monitoring and the stratification of test results to detect outbreaks, and to assess our needs for quarantine and isolation
- Data systems:
 - Developing Laboratory Information Management System (LIMS)
 - Using Point and Click (from Colonial Health) to integrate symptom tracking, lab results and reporting to DC Health as well as linking to the CHC and the occupational health center.

Thresholds/metrics to consider:

- Local DC DOH phases and guidelines
- Testing
- Transmission/Disease burden
- Syndromic surveillance at student and occupational health
- Resource availability
- Case investigation/Contact tracing
- Detection of outbreaks/
characteristics of outbreaks (e.g. on campus or city involvement)

Operational Issues

- Completing the necessary planning to operationalize the testing and case investigation program and have begun to purchase equipment and hire staff.
- Laboratory space has been identified in the SEH and we aim to have an operational lab by 7/31.
- GW has contracted with a programmer who is creating the new LIMS system
- GW is working on an agreement with PNC to install the new COVID modules that we need for symptom tracking and data flow
- GW is working on a myriad of logistical and coordination issues related to implementation of this plan.

DISCUSSION

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