

LUMS STRATEGY FOR HEALTH AND SAFETY, PROTECTION, AND MITIGATION FOR COVID-19¹.

This document describes the Lahore University of Management Sciences' plan and implementation strategy to open the campus to residential students after the five month shutdown as a result of the COVID-19 global pandemic, and to ensure it remains open.

The document sets forward details of what to do and how to do it in order to ensure the campus remains open and COVID-19 cases do not spike at LUMS.

The plan and its strategy are based on the best available information at this time about the nature of the virus, and on an understanding of local constraints and challenges. These variables may change.

Current assumptions are: COVID-19 infection rates, though reported as decreasing nationally, are still continuing, and are likely to continue for the next year or two until adequate population (herd) immunity levels are achieved. Recent research suggests that though droplets and fomites do transmit infection, the larger culprit seems to be aerosolized transmission. This form of transmission seems to be the main source of transmissions.²

As a result, safety and prevention strategies include creating physical barriers to the inhalation of aerosolized COVID-19 — such as mandating masks and reducing population density by maintaining social and physical distancing measures will remain critical. Being outdoors offers added protection, and as such indoor activities should be minimized no matter how well we ventilate and clean indoor air. Luckily the weather in coming months will make it easier to institute these changes in LUMS.

The goal of the overall strategy is to:

- a) Protect health safety and well being of all those students, faculty, staff, and families using the LUMS campus.
- b) Mitigate against Covid-19 infection
- c) Care for those exposed to the infection
- d) Care for and maintain strict quarantine standards for those who get infected.

¹ Version dated **September 10, 2020**. The strategy will be updated based on feedback and as such remains a 'live' document

² (*It is Time to Address Airborne Transmission of COVID-19* Lidia Morawska 1, *, Donald K. Milton 2
1 International Laboratory for Air Quality and Health, WHO Collaborating Centre, Queensland University of Technology, 2 George Street, Brisbane, QLD 4001 Australia. Email: l.morawska@qut.edu.au)

The plan is built around **The Preventive Health Principles Focused on Harm Reduction and Risk Assessment**. The main objective of this strategy is to bring about **Behavior Change** and to **Minimize Risk** in the population so that community members can protect themselves and others by participating in a regimen that will require the instituting new habits, new behaviors, and new ways of organizing activities and physical space.

This process will be difficult and slow. But it can be done. It requires, in addition to specific SOPs, systems for information sharing, education, communication and support. LUMS' plan intends to provide all these by creating an ecosystem that does the above with articulated procedures and detailed SOPs implemented in a fashion that encourages compliance, keeping in mind that in such a situation relapses in behavior are common, and in fact expected. Compliance will be monitored and encouraged in a supportive manner by faculty and staff volunteers, and noncompliance will be discouraged by objective means.

LUMS' PLAN

The Plan

University administration has decided to invite a limited number of students in a first round to live on campus starting September 15, 2020. It plans to increase this number in subsequent weeks if the University is able to manage risks and ensure the safety and well being of all those using the campus.

The plan's success will depend on all community members' positive engagement and on effective communication, education and the reinforcement of behaviors by the administration in ways that are supportive and appropriate. Although we all share the risk and responsibility for each other's protection, a special onus is on the faculty and staff as role models and credible sources of information to demonstrate the required behaviors.

Preparation for Opening the Campus.

Given the unpredictable and life-threatening risks that COVID-19 infection poses, the University, on the one hand, and campus residents on the other, need to fulfill certain conditions. All those students who accept the invitation to be on campus should sign off to agree with these conditions, as should non-student community members. These conditions acknowledge that students, non-student community members, faculty and staff, fully understand the risks associated with opening the campus during the middle of the COVID-19 global health pandemic. The University administration has prepared and will fulfill certain conditions set forward below in order to receive students.

Preparatory conditions for students, as well as the rest of the campus's population are:

- All participants will provide baseline information about their health status, through a self-administered questionnaire.
- All students who have agreed to live on campus will stay confined to the campus and will not venture into the city of Lahore except under exceptional, approved circumstances specified in the SOP.
- Pre-approved staff members and graduate students who are day-scholars (eg. MS and PhD students) who need access to labs, will be allowed to visit campus for work and study purposes.
- No outsiders will be allowed to visit a student on campus without special permission obtained at least 24 hours in advance. In such a case, names and addresses of contacts must be documented.
- For their own safety, the movement of students may be monitored by use of technology such as a tracking app. Students will temporarily forfeit the right to privacy insofar as tracking is concerned.
- Everyone using the campus facilities will sign a declaration agreeing with the University policies regarding safety and expressly state they will comply with the SOPs.
- All members using the campus facilities will abide by the consequences of noncompliance as specified in the SOPs.
- All students who accept the invitation to be on campus must come with results from a serology test. Upon entry, those with negative serology results must take a COVID-19 PCR test and self-isolate until the results are provided (generally expected within 24 hours, though this may vary). The cost of this initial test will be borne by the University.
- While strongly recommended, if a test before coming to LUMS is not possible, the student take a serology test on arrival at LUMS and self isolate until the results are available (usually 24 hours). If the test is positive the student can join the general population on campus. If the test is negative the student will need to take a PCR test and self isolate until results are available. A positive PCR will mean the presence of Covid-19 and the need to be admitted to hospital or return home.
- Residents and others visiting the campus to use the facilities will participate in pooled testing.
- Egregious non-compliance with SOPs will lead to disciplinary proceedings that may include but are not limited to fines and forfeiture of residential privileges.

LUMS Preparations

- 1) Develop systems of ongoing channels of communications:

- Externally, coordinated with local health departments to stay updated on COVID-19 local transmission, with a designated hospital for back up support and the management of nursing service
 - Maintaining a regular communication channel with parents.
 - Internally for sharing updated information with the LUMS community.
 - Any information on friends and colleagues that may be showing symptoms or who are violating SOPs should be reported to the following email – health.safety@lums.edu.pk
- 2) Repurpose physical spaces to facilitate social distancing, including outside spaces, where feasible:
- Ensure proper ventilation of rooms and indoor activities. Air conditioning can be closed off completely and windows left open wherever feasible. If air-conditioning cannot be turned off, indoor recycled air should be replaced by as much fresh air as possible by opening windows, or adjusting air conditioning systems. Special air filters may be installed in air conditioning units in windowless buildings.
 - Ensure adequate supply of cleaning supplies, hand sanitizers and PPE as needed.
 - Define staff/faculty duties for monitoring. Each department assigns one faculty member to monitor SOP compliance by colleagues and their students on a particular day.
 - Realign LUMS's existing information and monitoring systems to manage and to capture data for future planning and to justify next steps.

Plan To Mitigate Against Infection

The objective of mitigation is to: maintain a healthy, safe environment by:

- 1) Encouraging outdoor activities, as well as letting fresh air into rooms and buildings. Avoid crowding indoors.
- 2) Reconfigure dining facilities, etc. for pick-up only.
- 3) Clean and disinfect appropriately all surfaces, and frequently those that are heavily trafficked. If a room has been potentially infected one must wait 12 hours before cleaning and disinfecting to minimize any potential for other employees to be exposed to respiratory droplets. If waiting 12 hours is not feasible, wait as long as possible. During this waiting period, open outside doors and windows to increase air circulation in these areas.

- 4) LUMS will develop SOPs to guide daily activities, and communicate them separately to its different community groups such as support staff and students.
- 5) LUMS will conduct a thorough hazard assessment to determine if hazards are present, or are likely to be present, and determine what type of equipment, supplies or PPE are needed for specific job duties.
- 6) Institute the practice of three basic personal behaviors that are critical to the protection of the individual as well as the community in any pandemic. These are:
 - Physical distancing.
 - Appropriate use of masks and PPEs.
 - Regular hand washing/sanitizing and other hygienic behaviors.

The practice of these three personal behaviors is the cornerstone of mitigation and protection from the virus going forward. It is not easy or automatic in a country such as Pakistan. This practice has to be instituted at both the individual level and at the community level; amongst ALL community members.

This practice requires a change in people's attitude and behavior—behavior change is difficult and always resisted. It requires people to absorb information about the problem that has to be communicated in a manner acceptable to people, from a credible source, and the desired behavior has to be facilitated. Behavior change requests should be communicated with humility and in culturally and linguistically sensitive ways. However, noncompliance should have consequences, which will be communicated clearly and should be followed through in a non-punitive manner.

These behaviors will be instituted in the campus community in two ways: 1) by education/training through formal means and 2) through informal means such as posters etc. placed in frequently trafficked areas, both done in culturally and linguistically sensitive manner. Monitoring and gentle reminders from faculty, who are role models for students, and from stewards and monitors who will remind us all to keep masks on in public places and to stay 2 meters apart. All this will be done in combination with concrete noncompliance consequences that are clearly communicated beforehand and that each individual must accept as conditions for being on campus.

The Evaluation of Mitigation Status in student population is done by:

- 1) While students are highly encouraged to report if they have symptoms as fever, some may be reluctant to do so. Random

physical checks will be conducted by nurses on alternate days on a sample of students to monitor health status.

- 2) Diagnostic (Pooled PCR) tests conducted every five days on random populations. Pooled random testing can be done under contractual arrangements with a commercial laboratory.
- 3) Anecdotal/observational evidence from stewards/faculty and from security camera feeds.

A Communication Plan will be developed to disseminate information on what is happening and will be shared with the community on a regular basis.

IMPLEMENTATION STRATEGY

For students: Establish Baseline Status of student population.

Determine the health of each individual, their understanding of the infection and the need for SOPs, their knowledge of the SOPs and the individual's COVID-free status BEFORE they physically come on campus. This will ensure at the outset, that only infection-free students arrive to campus.

The following is specific to students. A variation of such baseline information will be disseminated to all who use the campus.

The invitation package sent to each student will include the following:

- A self-administered health questionnaire.
- A self-administered COVID-19 quizzes, with a pre-test and post test. Information material about COVID, for those who fail the first attempt will also be provided.
- A copy of the conditions for living on campus.
- A declaration that the student signs, to say they agree with university conditions, have passed the COVID-19 compliance quiz, read the SOPs and agree to follow them, and are infection-free or protected with antibodies, when they arrive on campus.

Students who opt to not participate in this screening activity will mean they have opted to decline the invitation to stay on campus in person.

Students who opt to participate will present a positive serology test or a negative PCR test on arrival. The latter will be done within 24 hours as described earlier. Test results can be sent directly to the Dean of Student Affairs.

Similar basic health information will be obtained from each household on campus, provided by the head of household. The head of household will also be required to take the COVID-19 compliance quiz.

A baseline test of non-student population on campus will be completed. All those are already living on campus and day staff/day students should be tested to determine baseline infection status. Pooled testing is recommended here. Those who do not wish to participate in pool testing can opt out.

Post-Arrival

Everyone will be feeling the stress of changing ingrained and learned behaviors. Lack of “freedom” to socialize and other uncertainties will add to such stress. To mitigate against it, physical activity, such as the use of gyms for exercise and net games, and socialization will be encouraged alongside strict adherence to SOPs. In such circumstances being kind and supportive of each other is important. Specific individual psychological services already available on campus will be made easy to access.

LUMS has developed SOPs for a range of actions/activities. These SOPs are applicable to all community members except for identified/approved exceptions. See the attached SOPs Annex for protocols regarding:

- Reporting at the front gate.
- Housing and Living
- The provision of food and eating, and Khoka visits
- Academic instruction.
- Socializing/Parties/Events
- Prayers
- Gym and games
- Emergencies
- Psychological/mental health support
- What to do in the case of suspected exposure, possible infection, and diagnosed infection.
- Testing - wide, rapid and reliable testing should be available to the community to ensure disease free status, and infection detection.
- Pooled Testing is recommended every five days. Testing will be conducted and managed by a commercial laboratory. Each laboratory maintains its own protocols for pool testing.

What to do

- If a student/community member is exposed to possible infection.
- For contacts in suspected cases.
- A student tests positive.

- A service staff tests positive.
- A Faculty member or family member falls sick.
- A student wants to leave and go home, after falling sick.
- If a person needs to be quarantined/isolated.

See the SOPS Annex for all of the above.

MONITORING AND MANAGEMENT

Physical Monitoring can be conducted with the help of staff trained for the purpose as well as direct observations, however, for objective monitoring, a computer based Information Management System is needed to ensure quality assurance.

1) Stewards/Monitors - Realign existing staff: faculty, as well as volunteer students. Faculty make the best monitors since they are also role models for students and are a credible and trusted source of information. Stewards will be assigned to help and facilitate the students, and to encourage practicing good behavior in public and private spaces. The number of stewards and monitors will vary according to space needs and time of day. For example, more will be needed during meal times outside the PDC. Safety stewards need training on their tasks, which can be provided through computer based self-administered material.

3) An evening round at 8pm done virtually by representatives of the administration as well as a clinician and senior nurse to document "all well" status, and review daily the status of incidents to include the nature of the incident, reporting, and resolution. It is specifically needed if anyone is in quarantine/isolation. A manager will review this report every morning.

4) Regular review of security camera feeds can provide an overview of community behavior.

5) COVID-19 Information Management System -

This safety plan and implementation strategy is multi-layered and will be composed of many moving parts. A computer-based information system will be developed to collect and maintain information that allows monitoring, quality assurance management and the evaluation of activities. The system will also collect pertinent data to help strengthen the program, and to give relevant information to senior University management. LUMS' existing information system has most of the elements already in place. The Information Systems Department is working now to develop it further to fulfill these new monitoring and reporting requirements.