

Carnegie Mellon University

COVID-19 Pandemic Preparedness Guide for Researchers¹

The below series of questions are designed to guide principal investigators, senior personnel and lab managers through a *self-examination* of pandemic preparedness for their research.

There are two scenarios that must be considered when developing answers to these questions. The first is the possibility that sustained human-to-human transmission of a pathogen may lead the University to enact social distancing as a public health measure. Social distancing in this context is defined as the avoidance of congregate settings (e.g., classrooms, campus activities, offices, laboratories). In this scenario, distance learning and working-at-home will be strongly encouraged and in-person classroom instruction is likely to be suspended.

The second scenario is a suspension of normal University operations in the Pittsburgh region. In this scenario, excessive absenteeism is anticipated, in-person classroom instruction would be suspended, building support personnel would be minimized, public transportation may be minimal and emergency response capability may be reduced.

1. General Considerations

- 1.1. Do you have up-to-date contact information for all your students, post docs and employees (including home phone numbers, mobile telephone numbers and home e-mail addresses)?
- 1.2. Does your lab or facility serve multiple groups/departments (either as a “shared” facility or one in which equipment/space is used by collaborators and their students)? Do you have contact info for all researchers who access your facility so that they can be contacted about your specific guidance? Alternatively, could you enlist a communication chain (i.e., “phone tree”) to get the word out if needed?
- 1.3. Have you documented a list of critical operations that must be completed on a daily or routine basis to maintain the integrity of your key research initiatives? This should not be a list of every activity in your lab, but rather a list of critical functions necessary to ensure continuity and security of key research initiatives.
- 1.4. Are your students and staff sufficiently cross-trained to complete critical laboratory operations?
- 1.5. Have you determined the minimum number of staff necessary to complete these critical operations?
- 1.6. Do you have a backup of your electronic data, is your data portable, and can data be accessed remotely by authorized personnel? (Note: Backups and remote access plans must be consistent with any data security plans/controls in place.)
- 1.7. What are the consumable supplies needed to sustain critical operations in your lab? How long will your current inventory last? Are there alternative suppliers and/or materials you could explore in the event your primary supply chain is interrupted?
- 1.8. Are there critical pieces of equipment that cannot be shut down for extended periods of time and/or cannot be un-supervised and maintained for extended periods of time (~1 week or more) without risking the long-term functioning of the equipment and/or a critical research project/program?
- 1.9. If given a few days to prepare for the temporary suspension of normal operations for a period of several weeks, what steps are necessary to ensure continuity and security of your research?
- 1.10. If given a few hours to prepare for the temporary suspension of normal operations for a period of several weeks, what steps are necessary to ensure continuity and security of your research?
- 1.11. Have you identified tasks and activities related to your project that you and your students/staff could do remotely and continue to charge effort to sponsored projects and grants?

¹ This document is based on a “Pandemic Preparedness Guide for Researchers” developed by the University of Pittsburgh. CMU is grateful to colleagues in the Vice Chancellor for Research Office for their support in providing that document as a reference in its own preparations.

- 1.12. If the event circumstances prevent personnel from continuing to charge effort to externally sponsored grants, have you considered contingency plans (i.e., discretionary funds, shifting student effort and activity to other projects and/or TA support work) to support students and researchers?
- 1.13. Do you have a plan to preserve samples at steps in a process? If you are carrying out a long-term experiment and if it is feasible to preserve (for example, by freezing) samples at specific steps, you might consider doing this more often
- 1.14. Do you have a plan to prioritize work that can only be carried out in your research facility? Stockpiling results and data now that could be analyzed remotely in the future is a potential option that might create future flexibility.
- 1.15. Are you aware of all proposal or grant-related deadlines? Sponsor guidance should be followed. Contact the program officer for assistance if no information from the sponsor is available. The OVPR and Office of Sponsored Programs (OSP) maintains information related to COVID-19 from funding sponsors, including federal agencies.

2. Animal research (If applicable)

- 2.1. Do your research animals require specialized food, water, treatment and/or medication? If so, what volume of specialized inventory is present and is it sufficient for projected conditions?
- 2.2. Do you work with animal species that are susceptible to pathogens of concern for pandemics (such as influenza)? If so, are extra precautions necessary to mitigate potential transmission of the related pandemic pathogen from personnel to research animals?
- 2.3. Is your staff sufficiently cross-trained to complete critical animal support functions and operations currently performed by your lab personnel, and do they have access to the housing facility? Include any cross-trained personnel on the appropriate IACUC protocol.
- 2.4. Have you considered the impact to your animal models of 40% absenteeism among your staff due to illness?
- 2.5. If your research team is relatively small, have you planned for the impact of 100% absenteeism among your team?
- 2.6. Have you considered means to reduce the required husbandry for your animals in an emergency scenario, including ceasing breeding activities, and eliminating exposure of animals to biological or chemical hazards?
- 2.7. Have you identified a mechanism to identify and safeguard animal strains deemed to be most critical in periods when normal operations are not feasible?
- 2.8. Do you supervise a breeding protocol and what are the impacts of a pandemic on maintaining this function?

3. Human subject research (If applicable)

- 3.1. If you work with human study subjects or human patients as part of your research, have you considered that this research could be impacted or suspended due to fear and/or illness among the population?
- 3.2. If human subjects report to a designated facility for your research, have you identified an alternate site where the research can be accomplished?

- 3.3. Have you considered if it is possible to reduce the number of subjects/patients or the frequency of sessions with subjects/patients in the case of a pandemic emergency?
- 3.4. Do you maintain up-to-date contact information for subjects/patients? Is this information portable and remotely accessible to authorized personnel?
- 3.5. Do you have a plan to contact subjects/patients in the case that your research activities are suspended?
- 3.6. What are your plans to contact subjects prior to their scheduled visits to evaluate their health status and possible exposure to COVID 19?
- 3.7. What are your plans to delay or modify the study visit if the research subject acknowledges possible exposure to or symptoms of COVID 19?
- 3.8. Have you made plans for remote work that are consistent with your IRB protocols and protection of Personal Identifiable Information (PII)?