

Appendix 5:

Guidance for Human Subject Research

Summary

The following guidance was developed through a collaboration between the Harvard Institutional Review Boards (IRB) from the Harvard Longwood Campus and the Harvard University Area as well as faculty across FAS, SEAS and HMS to assist the research community with the preparation for research studies that involve in-person interactions with study participants. For more information on any modification that may be required to already approved IRB protocols, please see this link - <https://cuhs.harvard.edu/what-does-and-does-not-require-irb-review-and-approval>.

This guidance adheres to Harvard University's Core Principles for On-Campus Research which include:

- At this time, use of on-campus research space should be limited to those activities that cannot successfully be done remotely.
- Individuals should access only those areas of campus buildings that are necessary to do their work.
- On-campus research should be organized/prioritized to limit person density and simplify personal interaction networks while maintaining personal safety.
- On-campus researchers should adopt "universal precautions" designed to mitigate the risk of viral transmission, including frequent handwashing, physical distancing, proper use of University-issued or approved masks, avoidance of contact with high-touch surfaces, and attention to surface and equipment disinfection protocols.
- Explicit training on implementing these practices should be provided and demonstration of proficiency required prior to lab re-entry.

The extended guidelines in this Appendix build off these guidelines and are specific to the different stages involving human subjects research, from planning to follow ups. The overall guiding principles remain the same but additional considerations are outlined given the unique aspects of human subjects research (e.g. setting time bounds and additional PPE for continuous interactions <6f and considering risk to study participants, in particular those at higher risk of COVID-19).

PIs are responsible for developing plans for the resumption of human subjects research that demonstrate how risk is mitigated. For approval, PIs will have to follow the same process their institution has implemented for general lab reopening. Review will be done at the institutional level (FAS-SEAS as one unit) with input from the Chief Compliance Officer, Vice Provost for Research and outside experts as needed. Department/area chairs will lead the process and report into School Deans. Each institution will set their own deadline for initial submissions and any follow-on windows as needed. For multi-institutional collaborations, the guidelines of the institution where the research is being conducted are to be followed. More information may be found here - https://cuhs.harvard.edu/instructions-returning-person-human-subjects-research?admin_panel=1

Phased Approach to Minimize Risk

The restarting of human subjects research will be based on a phased approach using a clear set of guidelines for each phase. Given the diversity of human subjects research across the University, each institution will set their own criteria for a phased return to human subjects research. Institutions will be encouraged to share their criteria with others in order to have consistency where possible. ***Investigators should reach out to their local institutional and IRB leadership for specific guidance.***

Planning for a return to in-person interaction with study participants

- To reduce interaction time, is it possible for some or all study visit procedures to be completed via telephone or virtually? For example, is it possible to screen and consent individuals prior to coming into the lab? See *IRB Guidance on flexibility in documenting informed consent* for more information- <https://cuhs.harvard.edu/everything-you-wanted-know-about-documented-consent-were-afraid-ask>.
- Is it possible for some study visits or visit activities (e.g. vitals assessment, gait assessment) to be completed at the subject's local clinical lab, clinical office, or imaging center? For example, can the procedures occur in the context of a needed clinical care visit and/or through interaction with only the clinical care providers the participant would see even if not participating in the research?
- Review and modify the timing and scope of specific study visits to account for essential versus non-essential study procedures.
 - Create a list of study procedures that may prevent safe distancing or require modified use of PPE by participants (e.g., If there is a need to make oxygen measurements for energetics this will preclude a participant wearing surgical face mask). Document safety precautions and procedures that can be put in place to mitigate risk of infection of participants or research team members.
- Consider the study population and whether the research aims/questions could be sufficiently addressed without recruiting those at greatest risk of COVID-19 infection. It is recognized that some research studies require working with specific populations. See *CDC guidelines* for more information - <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html>
- Those that might be at higher risk for severe illness from COVID-19 include:
 - People of any age who have serious underlying medical conditions such as asthma, chronic lung disease, diabetes, high blood pressure, serious heart conditions, chronic kidney disease being treated with dialysis, metabolic syndrome, and liver disease;
 - Severe obesity;
 - People aged 65 years and older;
 - People in nursing homes or long-term care facilities;
 - Those that are immunocompromised.
 - Also consider those that may need to take extra precautions such as: people with disabilities, those that are homeless, or those that are pregnant.
- Consider what adjustments can be made to procedures and locations when study participants may not be able to wear masks. For example, this may apply to studies that involve infants and toddlers. Consideration should be given to not only mitigate risk for study team members interacting with the participant but also for the entire time that the participant will be on the Harvard campus.
- Minimize the use of paper forms.
- Identify applicable requirements or restrictions that have been or may be put into place at a national, regional, organizational or facility level and how these may impact the research (e.g., travel restrictions, school closings, remote work mandates).
- Be mindful of current federal, state, local, and institutional restrictions and guidelines on the conduct of research and face-to-face contact with human subjects.

- Before the resumption of any human subjects research, each Principal Investigator should develop standard operating procedures (SOP's) specific to their own research activities (including operations, equipment and procedures). This should also include the location of the research and the risk of exposure both due to geographical location and the facility types. (e.g., on campus, hospitals, clinics, schools, community, home). These SOP's should be submitted to local institutional leadership following the same guidelines for general lab re-opening. Area/Department Chairs will lead a review process that will involve having SOP's peer reviewed by faculty either within or outside the PI's institution. See *Harvard Research Laboratory Re-Entry Plan* - https://provost.harvard.edu/files/provost/files/harvard_university_research_laboratory_re-entry_plan_5.14.20.pdf
- A small number of PIs from across FAS and SEAS have developed SOPs for specific activities that have undergone peer review (Respirometry, EMG, EEG, TMS, Motion capture, Ultrasound imaging, Psychophysiology, Wearable robotics and textiles, Neuroimaging, Working with animals, Neuromuscular research, Behavioral experiments that take place at a computer, Blood sampling. Example FAS-SEAS SOPs and templates for creating SOPs can be found here - https://cuhs.harvard.edu/instructions-returning-person-human-subjects-research?admin_panel=1. ***Please also check if your local School/Department has any specific templates or guidance.***
- Develop a plan for Cleaning and Disinfecting Lab space. See “***Cleaning and Disinfecting of the Lab***” found at the end of the document.
- Determine what additional supplies may be needed: PPE, cleaning supplies, implementing disposable items.

Prior to interaction with study participants

Restrictions

- Restrict study visits to essential individuals.
 - Study visits should be restricted to only those individuals who are essential. This would include the study participant and legal guardians, legally authorized representatives, or family members, friends, or others who must be present with the participant for health care, research-related decisions, or to provide support to the individual.
- Limit the number of people present in an area at any given time.
 - This may involve creating a schedule for study team members, using multiple rooms for study visits, waiting areas, etc.
 - Consider whether it is possible to move study procedures to conference rooms or classrooms that have greater airflow and greater feasibility of maintaining social distance. For example, computers could be transported on carts to alternative testing spaces.
 - Only those individuals that are necessary to complete the study procedures should be present: study personnel, study subject, and those that may be there to assist the study subject, if necessary.
 - Consider using video conversations with individuals in different rooms/locations where possible to limit personal interactions.
 - Consider approaches to train personnel on study procedures virtually, if possible. If this is not possible, researchers requiring to be trained on specific study procedures may only be present at study visits if the training is required for them to perform their job. If this happens, the study team needs to be conscious of room occupancy and to maintain a safe environment for all.
- Prepare a schedule for visits to ensure sufficient time between visits.

- It is recommended to plan for sufficient time between visits of different participants to ensure proper sanitation of any materials or equipment as well as sufficient turnover of air where the study visit is being performed. Groups sharing spaces for human subjects research should have a schedule to enable this to be coordinated across groups and studies. A 2-hour time window is a good benchmark for a well-ventilated space. PI's should contact local institutional leadership for any questions related to space and HVAC systems.

Screening

- **Study Team:** All study team member that will be present in the lab space and/or that may come in contact with study participants, should self-screen prior to coming to the lab each day (see *Harvard University Screening Procedures for Harvard Affiliates* – <https://crimsonclear.harvard.edu/> as well as *CDC COVID-19 current screening guidelines* - <https://www.cdc.gov/coronavirus/2019-ncov/index.html>). Note that those Study Team members who at higher risk for severe illness from COVID-19 should consult with their Harvard School/Department on institutional guidelines.
- **Study Participants:** Study participants should be contacted and screened both on the day before the visit and immediately upon arrival (see *Screening Procedures* – https://cuhs.harvard.edu/instructions-returning-person-human-subjects-research?admin_panel=1 as well as *CDC COVID-19 current screening guidelines* - <https://www.cdc.gov/coronavirus/2019-ncov/index.html>)).
 - If the participant is unable to be reached the day before, the visit screening should be attempted the morning of the study visit in addition to the required screening immediately upon arrival.

Preparing Study Participants for the Visit

- **Communication to participants:** Research teams should consider communicating to participants before their study visit, outlining the following:
 - Depending on the level of information to be shared, consider developing a simple informational sheet that can be provided to all participants describing how the study team is making the environment as safe as possible when they come in for their research visit and so they know what to expect. If there are special procedures for visitors (e.g., parking, building access, or location change). Please see example template titled *COVID-19 Information Sheet for Participants* - https://cuhs.harvard.edu/instructions-returning-person-human-subjects-research?admin_panel=1
 - As part of communication to participants, share with them latest CDC guidelines on risk factor associated with COVID-19 - <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Instruct participants to bring water and a snack.
 - Advise participants that they should put on a facemask, regardless of symptoms, before leaving their home.
 - Inform participants of transportation options. It is recommended that a risk-based approach be used in considering the best method of transportation. Consider whether the individuals can safely walk to the lab or provide their own transportation. If this is possible, consider checking if your institution can offer free parking. Next, consider an Uber or taxi and whether the fee be reimbursed. Lastly, public transportation is strongly discouraged if it is the only option.

- Preparing the Study Visit Area:
 - Clean and Disinfect study lab/visit space. This may include tables, chairs, equipment such as MRI machines, VR headsets, wearable systems, and other non-disposable equipment or items used during the study visit. See “***Cleaning and Disinfecting of the Lab***” found at the end of the document as well as *CDC guidance on Cleaning and Disinfecting* - <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
 - Space utilized for study visits should be cleaned and disinfected daily, in between each participant study visit, and after all visits are completed for the day.
 - Designate experiment areas and areas for guardians / other visitors and their belongings.
 - Preparing the lab space before the participant arrives (e.g. propping open doors, calibrating all equipment, etc.).
 - Covering keyboards, mice, tablets and other devices in plastic (e.g. saran wrap).
 - Have PPE available for study participants (which includes face masks, and hand sanitizer).
 - Study team should also have a supply of bottled water and non-perishable snacks on hand in case needed.
 - If study procedures prevent being two meters/6 feet apart, it is encouraged to set up a plexiglass barrier to separate study staff and participant when possible.

Training

- All essential personnel should review proper PPE use prior to interaction with participants and have completed all University training modules related to returning to research. In addition, all personnel should stay aware of updated *CDC PPE guidance* - <https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html>

During the Visit

- Study staff should be ready for study participant by wearing PPE and having all materials, equipment, and all other items ready for the visit. Study staff should wash or sanitize their hands just before study visit begins, and throughout study visit (I.e. both before and after contacting a study participant or piece of equipment or surfaces in vicinity of participant).
- Screen all study participants and family members, caretakers, legal representatives, etc. before entering the lab/building (see *Screening Procedures* – https://cuhs.harvard.edu/instructions-returning-person-human-subjects-research?admin_panel=1 as well as *CDC COVID-19 current screening guidelines* - <https://www.cdc.gov/coronavirus/2019-ncov/index.html>))
- Provide all study participants and anyone else present (e.g., family members, caretakers, legal representatives) with PPE to wear during the visit in accordance with University guidelines, even if they have their own.
- If and when possible, study staff should maintain distance from participant. Remain two meters/6 feet apart and it is encouraged to use a plexiglass barrier to separate study staff and participant when possible.
- Consider monitoring experiments using (non-recording) cameras, if possible, to create additional physical separation.
- Consenting should be conducted virtually when possible. If the consent process will happen in person, consider a contactless method by which to obtain consent (i.e., not having to use pen and paper), for example, sending the form electronically and having the individual document using their phone or iPad.

- If study protocol prevents safe distancing, seek local institutional guidance to see if additional PPE measures should be taken (e.g. a gown, a face mask, and/or a face shield or goggles). Ensure that PPE is being used by all for the duration of the study visit. Also consider if it is possible to have study team member and participant face in opposite directions.
- Anyone who needs to take a break to eat or drink does so at least 6 ft away from others and in advance notifies all the others present in the testing location to ensure adequate distancing during the break.
- If participants are able, advise them to announce their movements, when possible, in the space to avoid accidental breaching of distance.

After the Study Visit

- Clean and Disinfect study lab/visit space. This may include tables, chairs, equipment such as MRI machines, VR headsets, wearable systems, and other non-disposable equipment or items used during the study visit. See “**Cleaning and Disinfecting of the Lab**” found at the end of the document. As well as *CDC guidance on Cleaning and Disinfecting* - <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
- Space utilized for study visits (this includes all areas used by study participants, including restrooms) should be cleaned and disinfected daily, in between each participant study visit, and after all visits are completed for the day. See “**Cleaning and Disinfecting of the Lab**” found at the end of the document as well as *CDC guidance on Cleaning and Disinfecting* - <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
- Ensure that stock of PPE is replenished. This may include facemasks, hand sanitizer, etc.
- Study teams are advised to follow up with participant 3 days, 7 days, 14 days to assess emergence of symptoms or positive testing of COVID-19.
- If it is found out that a study team member or study subject has contracted COVID-19 following a study visit:
 - Determine when others (study team members and study subjects) may have been exposed. Collect information on persons who had contact with the ill individual during the time they had symptoms and 2 days prior to symptoms. Contact Harvard occupational health for guidance.
 - Notify all exposed individuals. Inform them of *CDC guidelines* - https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fif-you-are-sick%2Fcaring-for-yourself-at-home.html
 - Surfaces in their workspace should be cleaned and disinfected. See “**Cleaning and Disinfecting of the Lab**” found at the end of the document. As well as *CDC guidance on Cleaning and Disinfecting* - <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>.
 - Follow any additional guidelines for cleaning and isolation based on latest university guidelines and policies.

Cleaning and Disinfecting of the Lab Space where Study Visits Occur

Perform routine environmental cleaning and disinfection of lab areas:

- Routinely clean and disinfect all frequently touched surfaces, such as workstations, keyboards, telephones, handrails, and doorknobs.
- If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection. For disinfection, most common EPA-registered household disinfectants should be effective. A list of products that are EPA-approved for use against the virus that causes COVID-19 is available here - <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>. Follow the manufacturer's instructions for all cleaning and disinfection products (e.g., concentration, application method and contact time, etc.).
- Discourage study team members from using shared phones, desks, offices, or other tools and equipment, when possible.
- Provide disposable wipes so that commonly used surfaces (for example, doorknobs, keyboards, remote controls, desks, other work tools and equipment) can be wiped down before each use.
- Examples of equipment that would need to have cleaning protocols developed for would be MRI machines, VR headsets, wearable robots, robot arms, treadmills, wearable sensors, tablets and other computer input devices.
- If persons suspected/confirmed to have COVID-19 have been in the facility, check with local institutional leadership for appropriate measures. These may be enhanced cleaning and disinfecting or leaving a space vacant for a period of time.