Appendix I - Mask Fit-Enhancement Techniques

Improving Fit and Filtration for Face Coverings
Selection and use of a proper face covering are the most important decisions for protecting the public and personnel from SARS-CoV-2. A properly selected and worn face covering will have two or more layers of washable, breathable fabric and have a tight fit along the edges where the mask meets the skin. The CDC has provided information on techniques to improve the fit and filtration of face coverings. The main enhancement options include 1) knotting and tucking of surgical masks, 2) mask fitters/braces, and 3) double masking. Each identified option has limitations, and it is important that the appropriate strategy for the specific task or work environment is selected. Fit and filtration enhancement may be appropriate in the following scenarios:

- Indoor settings where physical distancing is not feasible, and personnel will work within 6 feet of any other person for a cumulative total of 15 minutes or more over a 24-hour period
- When work requires travel in a shared vehicle (e.g., animal transport)
- Public settings such as public transportation or grocery stores

The DOHS is available to provide consultation regarding the appropriate enhancements based on worksite Activity Hazard Assessments (AHAs). Please note that these guidelines apply primarily to non-patient care areas. The Clinical Center has published an update on the use of masks within the Building 10 complex. In general, this guidance should not supersede the CC policy. For specific questions on mask requirements and risk assessment as it pertains to patient care protocols, please consult Hospital Epidemiology.

Knot and Tuck of Procedure/Surgical Masks. This is a technique, as opposed to additional equipment. By tying knots in the ear loops (near the weld points on the mask) and tucking the ends inside the mask, the gaps that often exist at the corners of the mask are closed, reducing leakage. Research indicates that this can effectively reduce 95% of cumulative exposure to personnel when all personnel in a space use this technique. Personnel require instruction to properly tie the knots and tuck the ends. This solution is excellent for mentoring and teaching scenarios where scientists must demonstrate hands-on research skills. It will also be very helpful for procedures where personnel must work in close proximity for greater than 15 minutes. (e.g., surgical procedures, imaging, etc.).

A helpful video on this technique can be found at https://www.youtube.com/watch?v=UANi8Cc71A0&feature=youtu.be.

There are 4 basic steps to the knotting and tucking technique. They are illustrated below.

1. Fold the mask in half so the bottom corners meet the top corners.
2. Tie a knot close to the mask edge.
3. Expand the mask to its full size, unfurling the pleats.
4. Fold the excess fabric so that it is inside the mask.

It’s now ready to wear and will provide a much better seal to your face.
**Mask Fitters.** These are simple frames that are worn over cloth or disposable face coverings (not KN95s or N95s). They hold the mask tightly to the face around the nose and mouth. They are simple to use, effective on a wide variety of face coverings, and are easily cleanable if they are constructed of silicone or other non-porous material. There is a significant cost associated with these devices and they require training on wearing, disinfection, and storage. Free plans for 3D printed versions are available through a variety of online resources. **Selection:** Mask fitters/braces should be constructed of a non-porous, easily cleanable material that is compatible with disinfectants that will be used for cleaning them. The device should be constructed from a silicone-based or plastic material, with smooth surfaces, that are easy to clean and disinfect.

**Donning a Mask Fitter** When wearing a mask fitter there are some important things to consider for ensuring the best fit.

1) Clean your hands with soap and water or hand sanitizer before touching the mask.
2) Properly place a disposable face covering on your face, securing properly.
3) Inspect your mask fitter thoroughly. If there is dirt or debris on the fitter, clean it properly before use. If the mask fitter shows signs of degradation (i.e., tearing, cracking, loss of elasticity, etc.) dispose of it and replace with a new mask fitter.
4) Follow the instructions for the style of mask fitter you have (ear loop or bands)
   a) Mask fitters with ear loops (NOTE: Ear loop mask fitters may cause discomfort for longer use periods. If your work requires extended use (>1 continuous hour) then a mask fitter of this style is not preferred.):
      i) Hold the mask fitter by the ear loops.
      ii) Place a loop around each ear.
   b) Mask fitters with bands:
      i) Hold the mask fitter in your hand with the top of the mask fitter at fingertips, allowing the headbands to hang freely below hands
      ii) Place the frame of the mask fitter over the disposable face covering, placing it so that it forms a good fit around the mouth and nose. The frame should not touch skin and the edges of the mask should be outside the frame.
      iii) Pull the top strap over your head so that it rests on the crown of your head
      iv) Pull the bottom strap over your head so that it rests at the nape of your neck.
      v) Do not cross the straps on your head. Crossing these straps will reduce the effectiveness of the seal.
5) Try to "tent" your face mask around your mouth such that your mouth does not touch the face mask material and get it wet.
6) Adjust the tension to be comfortable but not overly tight. If the straps are too tight it may cause discomfort. The pressure from the frame should be uniform on the mask.
Doffing a Mask Fitter
1) Clean your hands with soap and water or hand sanitizer before touching the mask. Avoid touching the front of the mask and mask fitter as the mask may be contaminated. Only touch the ear loops or bands.
2) Mask fitter with ear loops: Hold both ear loops and gently lift and remove the mask fitter.
3) Mask fitter with bands: First, lift the bottom strap over your head, then pull the top strap over your head.
4) Clean mask fitter (see below).
5) Clean your hands with soap and water or hand sanitizer.

Cleaning and Disinfection of Mask Fitters
1) Mask fitters should be cleaned after each use.
2) Use an EPA approved List N disinfectant to thoroughly disinfect the mask fitter. Be certain that the disinfectant contacts all parts of the mask brace and allow for adequate contact time per the disinfectant manufacturer’s guidance.
3) Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
4) Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
5) Components should be hand-dried with a clean lint-free cloth or air-dried.

Storage of Mask Fitters
1. Follow the manufacturer’s instructions for proper storage.
2. After the mask fitter is thoroughly dry, place into a sealable, airtight container (e.g. Ziploc Bag ®) to prevent dust from gathering on it.
3. Store in a cool, dry place, out of direct sunlight. The mask fitter should be stored in a manner that does not create folds or creases in the fitter (e.g., flat in a cabinet or drawer, with nothing stored on top of it).
4. DO NOT store in your car, in extreme temperatures, or excessive humidity as this may degrade the mask fitter.

Double Masking. The addition of an additional mask layer may have significant benefits if done properly. Specifically, the use of a two-layer cloth mask over a disposable procedure/surgical mask helps improve the seal of the mask to the face and improves droplet filtration. Like knotting and tucking, research shows increased effectiveness at reducing cumulative exposure (i.e., approximately 95%) when all personnel are properly double masking. This additional cloth
mask should not be used when performing laboratory work including work with biologicals, chemicals, radioactive material, and animals, or anywhere animals are present, as only disposable masks are currently permitted for these tasks in any research setting on campus. NOTE: Double masking should not use two disposable masks as this will not improve the fit of the mask to the face and may reduce effectiveness. Also, double masking does not apply to layering two N95s or two KN95s over each other. Only a cloth mask over a disposable mask has been demonstrated to improve fit and filtration.

Limitations. The CDC acknowledges that some personnel may experience challenges when using some of these practices or equipment to improve fit and filtration. Personnel may experience breathing issues due to the increased filtration layers. In some instances, these enhancements may cause masks to obscure the wearer’s vision. Personnel that experience these conditions should stop the work they are performing and seek alternative means of reducing their potential exposure.
Appendix II - Exposure Risk Assessment Definitions

Definitions

- **Active monitoring** – Our program of post exposure monitoring requires a symptom log and follow up with OMS regardless of symptoms. An OMS representative will contact you on a schedule that that is mutually agreed upon. You are not allowed to be present in NIH facilities if you are in active monitoring. Unvaccinated individuals who are assessed to have high-risk exposures will typically be assigned to an active monitoring program. Active monitoring usually lasts 14 days after exposure but may be ended early with an appropriately timed negative PCR based test for COVID-19. Advice on the timing on this test will be given by the OMS case manager following your case. NIH provides this testing at no cost to employees and contractors. You may also be tested for free at many locations in the community under public programs or private insurance. Medical removal benefits under the OSHA Emergency Temporary Standard for COVID will apply if you are a healthcare worker.

- **Isolation** – A procedure that separates people who are sick with a contagious disease from people who are not sick. You will be placed in isolation if you are diagnosed with COVID-19 or have symptoms suggestive of COVID – 19 pending further evaluation. Isolation is usually voluntary, but in a public health emergency, officials have the authority to isolate people who are sick. If you become sick with COVID – 19, OMS will ask you to self-isolate at home if you are not ill enough to be admitted to a hospital. Your County Public Health Authority may order you to isolate. For most people with COVID-19 illness, isolation and precautions can be discontinued 10 days after symptom onset and resolution of fever for at least 24 hours, without the use of fever-reducing medications, and with improvement of other symptoms. Medical removal benefits under the OSHA Emergency Temporary Standard for COVID will apply if you are a healthcare worker.

- **Quarantine** – A procedure that separates people who have been exposed to a contagious disease from unexposed people. Quarantine can be voluntary, but in a public health emergency, officials have the authority to quarantine people who have been exposed to an infectious disease. If you have a high-risk exposure to COVID–19, OMS will ask you to self-quarantine at home. Depending on the circumstances, your County Public Health Authority may order you to quarantine. Removal from the workplace can be shortened for high-risk contacts and persons presumptively positive for COVID-19 if they have an appropriately timed negative PCR COVID-19 test. NIH provides this testing at no cost to employees and contractors. You may also be tested for free at many locations in the community under public programs or private insurance. Medical removal benefits under the OSHA Emergency Temporary Standard for COVID will apply if you are a healthcare worker. Workers with approved telework agreements are
expected to work from home during quarantine. If they are unable to work from home, they will need to work with their supervisor on the appropriate leave to record.

- **Self-monitoring** – A program of post exposure monitoring to carefully watch for COVID-19 symptoms and promptly self-isolate, report to OMS via OMS COVID-19 screening questionnaire, and obtain testing if symptoms develop. Individuals who are assessed to have low-risk exposures and vaccinated individuals with high-risk exposures are typically assigned to self-monitoring. Self-monitoring usually lasts 14 days after exposure but may be ended early with an appropriately timed negative PCR based test for COVID–19. NIH provides this testing at no cost to employees and contractors. You may also be tested for free at many locations in the community under public programs or private insurance.
Appendix III – Disinfectant Labels

Reading Disinfectant Labels
It’s important to use a disinfectant that is listed on the EPA List N: Disinfectants for Use Against SARS-CoV-2 (COVID-19) https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19

When reviewing a disinfectants label, take note of the following:

1) Active ingredients
2) List of microorganisms the disinfectant is effective at killing
3) Contact time for the organism of interest (coronavirus)
4) EPA registration number (this can be cross-checked for effectiveness against coronavirus using the link above)
Appendix IV – Risk Matrix for Workplace Operations

OSHA’s Occupational Risk Pyramid for COVID-19 categorizes workers based on their risk of exposure to COVID-19. This risk pyramid reflects ranking workplace risks by using the hierarchy of controls which provides guidance to the effectiveness of different measures that can be used to mitigate a risk of exposure. Attention should focus on elimination and engineering controls, before applying administrative controls or personal protective equipment (PPE) as these are less effective measures to control hazards. This pyramid was applied to the NIH workplace, predominantly applicable to laboratory settings, resulting in the following risk categories.

Please note, that clinical settings must consult the NIH clinical center infection control procedures and requirements, as they may differ due to health concerns of their patient populations. Administrative settings may employ a wide variety of technological and spacing controls, and likely are outside the scope of this appendix.

Caveat: the risk matrix below is assuming several factors to decrease the potential exposure to SARS-CoV-2 in the workplace. This assumes persons are healthy and are not coming to work when experiencing symptoms indicative of COVID-19 infection. If persons are sneezing or coughing, there is a potential for leakage around the facial covering, and this risk matrix assumes normal breathing parameters. The data are not fully conclusive, and a combination of factors must be in place to reasonably prevent COVID-19 disease. These measures need to be followed inside and outside of the workplace. This means that physical distancing, face coverings, hand hygiene and symptom assessment are performed as a standard of behavior. This risk matrix also assumes staff have operational guidelines for density in the lab, cleaning protocols, as well as operational requirements (unidirectional flows, scheduling) to assist in minimizing risk. The risk mitigation measures in this document do not supersede or replace measures outlined in pathogen or recombinant DNA registration documents.
• Low: Work activities that follow NIH Safety guidance recommendations, maintaining >6 ft distance between persons.
• Medium: Work activities that are performed within 3-6 ft distance between persons or less than 3 ft distance for <15 minutes.
• High: Work activities that are performed with <3 ft distance between persons for >15 minutes duration.
• Very High: Work activities that are performed with known COVID-19 positive sample types (serum/blood/respiratory/stool), work with live SARS-CoV-2 virus or aerosol generating procedures with known, suspected or confirmed positive patients.

In addition to use of facial coverings as described in the NIH Return to Work Safety guidance document, some work activities requiring closer interactions may dictate use of additional precautions. Research has shown that use of surgical masks reduces the potential to spread contaminants when compared to a standard disposable mask\textsuperscript{1,4-5}. Recent data has demonstrated that the fit and filtration of face coverings can be improved using simple techniques or equipment. Knotting and tucking of medical procedure/surgical masks, use of mask fitters/braces, and double masking (a cloth mask over a disposable procedure/surgical mask) have been shown to improve the effectiveness of facial coverings. Additionally, face shields are a good protective measure for acutely expelled aerosols (within 1-3 ft) and offer the advantage of guarding the entire face\textsuperscript{2}. One study demonstrated a 96% reduction in infectious particles when using a face shield near the source of particles\textsuperscript{3}. Of note, face shields have been shown to be less effective when further away from the source\textsuperscript{2}. Additionally, face shields mean the full-face shields that attach at the forehead and cover the entire face. Face masks with attached eye protection only do not meet the layering requirement for a facial covering plus face shield.

The chart below outlines PPE and in some cases engineering/administrative controls recommended for activities that fall under each of the following NIH risk level categories. Note that face shields can be disposable or reusable. If reusable face shields are used, they should be assigned to individual staff members and not shared. If reused, they must be decontaminated after use with an EPA approved disinfectant effective against coronavirus for the appropriate contact time (even if they are not shared). If a film is left over after the contact time is achieved, using a damp paper cloth will remove this film to allow better vision through the shield.

As a reminder, any use or installation of a barrier or plexiglass shield must follow the requirements outlined earlier in the Safety Guidance. It is recommended that DOHS and the NIH Fire Marshal be consulted prior to install.
<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Admin/Engineering Controls</th>
<th>Recommended PPE</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low</strong></td>
<td>Refer to <em>NIH Safety Guidance for Return to Physical Workplace</em>&lt;br&gt;  Maintain at least 6 ft&lt;br&gt; Use of plastic barriers may be useful to provide physical barrier between persons. Exercise virtual options, telework or telehealth options to reduce face-to-face contact</td>
<td>Lab coat, gloves and eye protection as required by <em>NIH Manual Chapter 1340</em> plus disposable facial covering* for source control in accordance with Safety Guidance.&lt;br&gt; <em>Procedure mask or ASTM Level 1 mask</em>¹</td>
<td><a href="https://www.osha.gov/Publications/OSHA3990.pdf">https://www.osha.gov/Publications/OSHA3990.pdf</a>&lt;br&gt; <a href="https://aip.scitation.org/doi/10.1063/5.0016018">https://aip.scitation.org/doi/10.1063/5.0016018</a></td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>Consider addition of partitions that don’t disrupt other engineering controls (airflow of downdraft table, BSC). Perform this assessment in conjunction with your safety specialist.&lt;br&gt; Consider arranging work so that tasks are separately physically and temporally where possible. This will assist in limiting staff in close proximity to each other. Exercise virtual options, telework or telehealth options to reduce face-to-face contact</td>
<td>Standard lab PPE plus a medical or surgical grade mask* should be used if within 3-6 feet for less than 15 minutes. Staff should consider knotting and tucking or surgical masks or using a mask fitter to improve mask fit. Face shields should be considered as an additional layer of protection.&lt;br&gt; <em>ASTM Level 2 or 3 mask</em>¹</td>
<td><a href="https://science.sciencemag.org/content/368/6498/1422">https://science.sciencemag.org/content/368/6498/1422</a>&lt;br&gt; <a href="https://www.nature.com/article/s41591-020-0843-2.pdf">https://www.nature.com/article/s41591-020-0843-2.pdf</a>&lt;br&gt; <a href="https://www.cardinalhealth.com/content/dam/corp/web/documents/whitepaper/Face%20Mask%20Selection%20Guide.pdf">https://www.cardinalhealth.com/content/dam/corp/web/documents/whitepaper/Face%20Mask%20Selection%20Guide.pdf</a>&lt;br&gt; <a href="https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2931142-9">https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2931142-9</a>&lt;br&gt; <a href="https://www.tandfonline.com/doi/full/10.1080/15459624.2015.1095302">https://www.tandfonline.com/doi/full/10.1080/15459624.2015.1095302</a></td>
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<tr>
<td>Risk Level</td>
<td>Admin/Engineering Controls</td>
<td>Recommended PPE</td>
<td>References</td>
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<tr>
<td>High Risk</td>
<td>Record close proximity work (date, names, length of time in contact) Avoid standing directly across from others, stagger location. Include frequent training and reminders on self-assessment for symptoms and reporting of symptoms to supervisor. Operations in this category must be reviewed by supervisor. DOHS is available for consult on activity hazard analyses and risk assessment guidance.</td>
<td>Standard lab PPE plus a face shield and a medical or surgical grade mask.* The knot and tuck method or a mask fitter should be used. Some procedures and patient settings may warrant use of N95s. Lab and animal care personnel should utilize a knot and tuck technique or use a mask fitter/brace. Double masking (cloth on top of disposable) may be appropriate for some areas outside of a lab or animal research setting. Consult DOHS for a risk assessment.</td>
<td><a href="https://www.cdc.gov/niosh/topics/eye/eye-infectious.html">https://www.cdc.gov/niosh/topics/eye/eye-infectious.html</a> <a href="https://www.tandfonline.com/doi/full/10.1080/15459624.2012.725986">https://www.tandfonline.com/doi/full/10.1080/15459624.2012.725986</a> <a href="https://www.tandfonline.com/doi/full/10.1080/15459624.2013.877591">https://www.tandfonline.com/doi/full/10.1080/15459624.2013.877591</a></td>
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<tr>
<td>Risk Level</td>
<td>Admin/Engineering Controls</td>
<td>Recommended PPE</td>
<td>References</td>
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| Very High Risk  | All lab work in this category requires pathogen registration with the Institutional Biosafety Committee. Recommendations will be provided upon approval to commence the research. Clinical operations should be reviewed with your supervisor, and where appropriate, Clinical Center Epidemiology Services and DOHS. | Follow requirements outlined in pathogen registration document. Procedural SOP and PPE should be determined by supervisor to be commensurate with the risk. Likely requires respiratory protection, and compliance with medical clearance and fit test requirements. Additional PPE will be warranted based on procedures and infection control measures. | Manual Chapter 3035  
NIH Recombinant DNA Guidelines (Risk Group 3) |

1 Face masks are rated by ASTM International based on five criteria according to the ASTM F2100-11 standard. Below are the criteria that are most commonly listed by manufacturers to help determine the rating level. The bacterial and particulate filtration efficiency tests help determine the material’s ability to filter out aerosols of bacteria and particulates respectively. Fluid penetration resistance is measured by a horizontal projection of synthetic blood at known velocities corresponding to human blood pressure (mm hg).

| BFE (Bacterial Filtration Efficiency) at 3.0 micron | ≥ 95% |
| PFE (Particulate Filtration Efficiency) at 0.1 micron | ≥ 98% |
| Fluid Resistance to Synthetic Blood (mm Hg) | ≥ 98% |
| 80     | 120  | 160  |
**Appendix V – Recommended PPE Decision Chart**

The chart below is complimentary to the risk matrix contained in the previous appendix (Appendix IV). After determining the risk level for your (non-clinical) work task from this appendix, look at the column below which matches that risk level. Recommended PPE is listed below each risk level, in descending order of preference. As availability of PPE in the marketplace continues to fluctuate, you can select less preferred PPE (lower on the chart) if preferred PPE (higher on the chart) is unavailable. As a reminder, using the knot and tuck technique can improve the effectiveness of procedure and surgical masks. For more information, reference the section in this document on *Improving Fit and Filtration of Face Coverings*. Always consult DOHS before considering the provision of respirators where procedure or surgical masks are listed as the recommended PPE.

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>Medium Risk</th>
<th>High Risk</th>
<th>Very High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Mask or ASTM Level 1 Mask</td>
<td>ASTM Level 2 or 3 Mask</td>
<td>ASTM Level 2 or 3 Mask AND Face Shield*</td>
<td>Consult DOHS</td>
</tr>
<tr>
<td>ASTM Level 2 or 3 Mask</td>
<td>Procedure Mask or ASTM Level 1 Mask AND Face Shield*</td>
<td>A mask fitter/brace could be used to improve effectiveness of masks for personnel in laboratory or animal areas. Double masking could be helpful in other areas.</td>
<td>Stop Work and Redesign to Lower Risk Level</td>
</tr>
<tr>
<td></td>
<td>Stop Work and Redesign to Lower Risk Level</td>
<td>Stop Work and Redesign to Lower Risk Level</td>
<td></td>
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</tbody>
</table>
*Masks with integrated face shields are not equivalent protection to the combination of a mask and a full-face shield. For these risk levels, separate masks and full-face shields are required.

PPE and masks are available from the NIH Supply Center.
Appendix VI – Hazard Assessments and Standard Operating Procedures

The NIH has developed a repository for workplace hazard assessments mandated under 29 CFR 1910.502. The employer must conduct a workplace-specific hazard assessment to identify potential workplace hazards related to COVID–19 in all healthcare facilities.

Clinical Center Patient Care Hazard Assessments and Policies and Other COVID-19 documents can be found at:
https://intranet.cc.nih.gov/hospitalepidemiology/emerging_infectious_diseases

All other workplace hazard assessments and SOPs can be found at:
https://orsweb.od.nih.gov/sites/dohs/covidahassops/
Appendix VII - Workspace Re-Occupancy Evaluation Tool

At least three weeks prior to employees’ anticipated return-to-work date, it is recommended that supervisors physically survey the work environment and follow this workspace evaluation tool to ensure the work environment is safe and comfortable for all:

- For the health and safety of staff, housekeeping did not enter most office spaces after March of 2020. Submit a request for housekeeping to perform a basic cleaning of areas that will be reoccupied (vacuuming, wiping of surfaces).
  - You must submit your requests for housekeeping to the Office of Research Facilities (ORF) help desk at 301-435-8000 or online at https://58000.nih.gov. Your request must include “Return to Work” in the description as this will allow ORF to prioritize and track housekeeping tickets.
  - Wipe down any surfaces that show obvious dust with a damp paper towel or cloth.

- Are there any odors present? If yes:
  - Check all trash receptacles in common areas and individual offices that may not have been emptied. Place all trash in hallways outside offices for housekeeping to empty.
  - Check refrigerators and dispose of any food or beverages present. Do not consume anything of unknown origin.
  - Clean and dry any dirty dishes left in common area sinks.
  - Run all faucets in sinks that may have dried out for approximately 5 minutes. Run any dish disposals with water and dish soap.
  - Return after a few days to see if odors have lessened. If not, contact ORF at 301-435-8000 or submit a request online at https://58000.nih.gov.

- Is there any water damage on walls or ceiling tiles, visible mold growth, or musty odors? Contact ORF for remediation. Call 301-435-8000 for ORF support or submit a request online at https://58000.nih.gov.
  - Do not reoccupy the affected space until ORF has indicated that remediation is complete.

- Is there any evidence of pest activity?
  - Follow the steps listed above for dealing with odors.
  - Return after a few days to see if pest activity has lessened. Call DOHS at 301-496-4294 to request pest management services.
  - Please note, pest monitoring devices may not have been accessible during the pandemic and may show signs of pest activity. This is not necessarily indicative of a major problem. Please contact the NIH Integrated Pest Management Program for assistance.
Appendix VIII. OSHA Emergency Temporary Standards
(THSE HAVE BEEN WITHDRAWN BY OSHA BUT IS STILL CONSIDERED BY THE NIH AS INDUSTRY BEST PRACTICES)

In June 2021 the Occupational Health and Safety Administration issued an Emergency Temporary Standard (ETS) for Healthcare Facilities (29 CFR 1910.502) and a mini-respiratory protection ETS (29 CFR 1910.504). The guidance outlined in the document should be considered mandatory for locations that are covered by these standards. The following locations shall adhere to the guidance in this document relevant to 29 CFR 1910.502 and 504:

- Clinical Center Patient Care Areas
- Clinical Center Hospital Support Services
- The NIH Bethesda Campus COVID-19 Carline Testing Site
- Contractors entering the NIH Patient Care or Hospital Support Services areas
- NIH Fire Department when emergency health services are provided

Other locations that provide non-hospital, ambulatory care (e.g., any vaccine clinic, asymptomatic testing site, or the NIH Occupational Medical Service (OMS) clinic outside the clinical center) are exempt from the ETS because personnel and visitors entering those sites are screened for COVID-19 symptoms and excluded from entry if they have suspected or confirmed COVID-19. This should not be construed to mean that physical distancing, masking, population densities or other guidance in this document is not required, but rather that those locations that are covered by the standard are subject to additional scrutiny.

Specific elements covered by the OSHA Healthcare ETS include a requirement for a COVID-19 Safety Plan that includes workplace hazard assessments, input from non-managerial personnel, monitoring for plan effectiveness, and methods to minimize transmission of the virus causing COVID-19. This document will serve as the COVID-19 Safety Plan for areas requiring it under the OSHA ETS. Links to Workplace Hazard Assessments and Standard Operating Procedures are included in Appendix VI - Hazard Assessments and Standard Operating Procedures of this document.

COVID-19 Safety Coordinators
The OSHA Healthcare ETS requires that the employer identifies COVID-19 Safety Coordinators. The NIH COVID-19 Safety Coordinators by area of responsibility are listed below.

<table>
<thead>
<tr>
<th>Location (Areas of Responsibility)</th>
<th>COVID-19 Safety Coordinator</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIH Clinical Center</td>
<td>Hospital Epidemiologist</td>
<td>301-827-9089</td>
</tr>
<tr>
<td>NIH ORF and ORS services supporting the Clinical Center</td>
<td>Division of Occupational Health and Safety Director</td>
<td>301-496-2960</td>
</tr>
<tr>
<td>NIH Car-Line Testing Site</td>
<td>Division of Occupational Health and Safety Director</td>
<td>301-496-2960</td>
</tr>
</tbody>
</table>
The COVID-19 Safety Coordinator’s role is to implement and monitor the COVID–19 plan. The COVID–19 safety coordinators are knowledgeable in infection control principles and practices as they apply to the workplace and employee job operations. The safety coordinators are NIH personnel that have the authority to ensure compliance with the COVID–19 plan.

### COVID-19 ETS Requirements Summary and Reference

<table>
<thead>
<tr>
<th>OSHA Healthcare ETS Requirement</th>
<th>Requirement Summary</th>
<th>NIH Policy or Plan Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Screening and Management</td>
<td>Requires that access to facilities be limited and that visitors are screened for suspected or confirmed COVID-19 cases. Also includes Patient management strategies</td>
<td>This document, Self-Monitoring Appendix VI – Hazard Assessments and Standard Operating Procedures The <a href="#">COVID-19 Phone Screening Tool</a> is completed for Clinical Center patients within 48 hours prior to arrival, followed by screening upon entry to Building 10, and again for CRIS Emerging Infections Screening upon arrival to Clinic/Patient Care unit <a href="#">Coronavirus (COVID-19) Fact Sheet for NIH Clinical Center Patients and Visitors</a> <a href="#">New COVID-19 Testing Plan for Clinical Center Inpatient Admissions</a> <a href="#">Update to Patient Visitor Policy</a> Clinical Center verify CDC’s patient management strategies are incorporated: <a href="#">Infection Control During COVID-19 (Inpatients and Visitors)</a> Contract language drafted for incorporation into all contracts supporting healthcare service at the NIH. Require multi-employer workplace agreements related to infection control policies and procedures, the use of common areas, and the use of shared equipment that affect employees at the workplace. See 1910.502(n)(1)(v)</td>
</tr>
<tr>
<td>Standard and Transmission</td>
<td>Develop and implement</td>
<td>Appendix VI – Hazard Assessments and Standard Operating Procedures</td>
</tr>
<tr>
<td>OSHA Healthcare ETS Requirement</td>
<td>Requirement Summary</td>
<td>NIH Policy or Plan Reference</td>
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<tr>
<td>Based Precautions</td>
<td>policies and procedures in accordance with CDC regarding standard and transmission-based precautions</td>
<td>This document, Facial Coverings (Cloth Face Coverings, Surgical Masks, and N95 Respirators)</td>
</tr>
<tr>
<td>Personal Protective Equipment (PPE)</td>
<td>Mandate facemasks and their proper wearing, provide and ensure PPE usage when performing aerosol-generating procedures on suspect or confirmed COVID-19 patients, provide respirators and other PPE in accordance with standard and transmission-based precautions, allowance of voluntary respiratory usage per 1910.504</td>
<td>This document, Appendix IV – Risk Matrix for Workplace Operations, Appendix V – Recommended PPE Decision Chart This document Appendix VI – Hazard Assessments and Standard Operating Procedures Clinical Center Guidelines for Use of Masks for Patient Care Clinical Center Guidelines for Use and Care of Face Shields NIH Respiratory Protection Program Voluntary Respirator Use Information and Certification</td>
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<tr>
<td>Aerosol-Generating</td>
<td>Where there are suspected</td>
<td>Clinical Center Intranet Hospital Epidemiology Emerging Infections Diseases webpage</td>
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<tr>
<td>Procedures (AGP)</td>
<td>or confirmed COVID-19 cases, limit staff to essential employees; Perform procedures in an airborne infection isolation room (AIIR), if available, and clean and disinfect surfaces and equipment once the procedure is completed</td>
<td><strong>Clinical Center Infection Control Guidelines</strong>&lt;br&gt;Managing Symptomatic Patients in the Clinical Center:&lt;br&gt;<strong>Bringing Patients with Active and Suspected COVID-19 Infection (PUIs) to the Clinical Center</strong>&lt;br&gt;Testing Symptomatic Patient (Inpatient / Outpatient)&lt;br&gt;<strong>Transport of COVID-19 Patients and PUIs</strong>&lt;br&gt;<strong>Discontinuing Enhanced Respiratory Isolation</strong>&lt;br&gt;<strong>Bronchoscopy</strong>&lt;br&gt;Department of Perioperative Medicine <strong>Preoperative Screening for COVID-19</strong>&lt;br&gt;<strong>GI Endoscopy</strong>&lt;br&gt;<strong>Interventional Radiology</strong>&lt;br&gt;<strong>Metabolic Clinical Research Unit Studies</strong>&lt;br&gt;<strong>Nasal Endoscopy</strong>&lt;br&gt;<strong>Pulmonary Function Testing</strong>&lt;br&gt;<strong>Tracheostomy</strong>&lt;br&gt;Managing Recovered COVID-19 Patients:&lt;br&gt;<strong>Clinician Fact Sheet</strong>&lt;br&gt;Additional Resources for Clinical Center Staff:&lt;br&gt;<strong>COVID-19 Surveillance Testing for Inpatients – Staff Fact Sheet</strong>&lt;br&gt;<strong>Inpatient Visitors: Rooming-In</strong></td>
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<td>Managing CC Patient Visitors During the COVID-19 Pandemic: Requesting an Exception</td>
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<td>Mask and Face Shield Reminder</td>
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<td>Trach and Neck Stoma Patients: COVID-19 Source Control and COVID-19 Testing</td>
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<td>NIH FRS SOP on Patient Transport Available upon request</td>
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<td></td>
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<td>See also this document, Appendix VI – Hazard Assessments and Standard Operating Procedures</td>
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<tr>
<td>Physical Distancing</td>
<td>Maintain 6’ of physical distancing whenever possible</td>
<td>This document, Physical Distancing</td>
</tr>
<tr>
<td>Physical Barriers</td>
<td>Where physical distancing cannot be maintained, use physical barriers to limit exposure to droplets</td>
<td>This document, Requirements and Considerations for the Use of Barriers</td>
</tr>
<tr>
<td>Cleaning and Disinfection</td>
<td>Follow CDC guideline regarding disinfection and cleaning of areas</td>
<td>This document, Guidance on Cleaning and Disinfection Clinical Center: Policies require that spaces are thoroughly disinfected between patients.</td>
</tr>
<tr>
<td>Ventilation</td>
<td>Maximize fresh air in the HVAC system and utilize MERV-13 or higher filters for the HVAC system</td>
<td>ORF COVID-19 Ventilation memo (Available upon request)</td>
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<tr>
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<tr>
<td>Health Screening and Medical Management</td>
<td>Screen employees (self-monitoring is acceptable). Each employee must report COVID-19 symptoms or suspected or confirmed COVID-19 to the employer. Employers must notify all employees who were not wearing respirators and/or required PPE of any COVID-19 exposure at the workplace. Personnel removed for COVID symptoms must be paid by the employer.</td>
<td>This document, Self-Monitoring SAFER-COVID Tool <a href="https://www.saferfederalworkforce.gov/faq/screening/">https://www.saferfederalworkforce.gov/faq/screening/</a> Contact tracing and notifications: This document, What Happens When Someone Tests Positive? Clinical Center: Appendix VI – Hazard Assessments and Standard Operating Procedures COVID-19 Staff Self-Isolation Guidance Periodic Testing of Asymptomatic CC Staff</td>
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<td>and side effects</td>
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<td>Training</td>
<td>Training for personnel and contractors on the elements of this plan</td>
<td>The NIH Safety Guidance Video, available in English online in the Learning Management System (LMS) is required for all personnel prior to entry into physical workspaces. Safety Guidance Video Technical Tips</td>
</tr>
<tr>
<td>Recordkeeping</td>
<td>Requires establishment of a COVID-19 log and make records available to employees</td>
<td>This document, What Happens When Someone Tests Positive?</td>
</tr>
<tr>
<td>Reporting</td>
<td>Any hospitalization of an employee due to COVID-19 must be reported to OSHA within 24 hours of the employer being notified. COVID-19 fatalities must be reported within 8 hours of employer being notified.</td>
<td>OMS and TAB OSHA Injury Reporting Requirements Procedure (available upon request)</td>
</tr>
<tr>
<td>Medical Removal from Workplace</td>
<td>If an employee is confirmed, diagnosed, or suspected of having COVID-19 by a licensed healthcare</td>
<td>If an NIH staff member tests positive for COVID-19, specific steps are taken, including communication from OMS to the supervisor that the staff member cannot report to work</td>
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</table>
This “Return to Work Guidance and COVID-19 Safety Plan, referred to subsequently as “this plan” has been shared with the NIH Occupational Safety and Health Committee (OSHC), the ORF Safety Committee, the ORS Safety Committee, the Clinical Center Safety Committee, and federal collective bargaining unit representatives. Feedback from these committees, which are composed of managerial and non-managerial staff has been used to ensure this plan is acceptable and feasible.

Personnel wishing to provide additional feedback on this plan and to provide input on its continual improvement may provide feedback through their IC Safety and Health Committees, their designated IC Safety and Health Specialist, the NIH Reporting Hazardous Conditions website, or through the COVID-19 Reporting tool. This plan will be reviewed quarterly to ensure it is relevant and that provided resources in the plan are current.

**Training**

All affected NIH personnel shall receive training on this plan and 29 CFR 1910.502. All health care personnel and healthcare support personnel, as well as impacted contractors must take this training. This training will be hosted on the NIH Learning Management System (LMS) and provide employees training on:

- COVID–19, including how the disease is transmitted (including pre-symptomatic and asymptomatic transmission), the importance of hand hygiene to reduce the risk of spreading COVID–19 infections, ways to reduce the risk of spreading COVID–19 through the proper covering of the nose and mouth, the signs and symptoms of the disease, risk factors for severe illness, and when to seek medical attention;
- Employer-specific policies and procedures on patient screening and management;
- Tasks and situations in the workplace that could result in COVID–19 infection;

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<td>provider, or is experiencing certain symptoms, they must be immediately removed from the workplace and kept away until return to work criteria are met</td>
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- 63 -
- Workplace-specific policies and procedures to prevent the spread of COVID–19 that are applicable to the employee’s duties (e.g., policies on Standard and Transmission-Based Precautions, physical distancing, physical barriers, ventilation, aerosol generating procedures);
- Employer-specific multi-employer workplace agreements related to infection control policies and procedures, the use of common areas, and the use of shared equipment that affect employees at the workplace;
- Employer-specific policies and procedures for PPE worn, including:
  - When PPE is required for protection against COVID–19;
  - Limitations of PPE for protection against COVID–19;
  - How to properly don, doff, and properly use PPE;
  - How to properly care for, store, clean, maintain, and dispose of PPE; and
  - Any modifications to donning, doffing, cleaning, storage, maintenance, and disposal procedures needed to address COVID–19 when PPE is worn to address workplace hazards other than COVID–19;
- Workplace-specific policies and procedures for cleaning and disinfection;
- Employer-specific policies and procedures on health screening and medical management;
- Available sick leave policies, any COVID–19-related benefits to which the employee may be entitled under applicable federal, state, or local laws, and other supportive policies and practices (e.g., telework, flexible hours);
- The identity of the safety coordinator(s) specified in the COVID–19 plan;
- The requirements of this section; and
- How the employee can obtain copies of this section and any employer specific policies and procedures developed under this section, including the employer’s written COVID–19 plan

Additional training will be provided by the supervisor regarding specific tasks. If changes are made to this plan or to job-specific protocols additional training will be provided. Any employee that does not demonstrate knowledge, understanding or skill implementing this plan will be required to attend additional training.

If, at any time during or after the training, personnel have questions about this program, they can contact their COVID-19 Safety Coordinator(s) named above.

**Contractors**

This plan, as it applies to the OSHA ETS, should be shared with affected contractors. Contractors are expected to comply with this plan. Employer-specific multi-employer workplace agreements related to infection control policies and procedures, the use of common areas, and the use of shared equipment that affect employees at the workplace must be established. These
agreements will specify that contractors must comply with the NIH Safety Guidance and COVID-19 Safety Plan for Working Onsite During the Coronavirus Pandemic and must share their company COVID-19 Safety Plans to the extent they impact expectations of NIH and other contract personnel at the affected site.

**Anti-Retaliation**

It is the policy of the NIH that no one at the NIH shall be discharged or discriminated against for exercising their rights under the OSHA ETS or for engaging in actions required by the ETS or any other applicable federal standard.
Appendix IX – Code of Conduct

**Code of Conduct Expectation**

To safely and successfully work at the NIH, we must consciously cultivate a culture of safety and responsibility in all areas. In occupational health and safety guidance, there are several key elements to building a workplace culture of safety that we incorporate in this effort: communication, employee involvement, training, leadership by example and a well-defined reporting process. This document is meant to inform the expected Code of Conduct of all NIH staff to uphold the safety work practices and policies set into place to minimize exposure of staff as they are returning to and working in the physical workspaces.

Please sign below to acknowledge that you understand the NIH’s expectations in complying to this Code of Conduct:

**Individual Responsibilities**

To be permitted to enter physical workspaces, individuals must:

1. Complete COVID-19 worksite specific training relevant for one’s access as required by their supervisor or ICO. Additionally, viewing the DOHS video is required for all NIH employees and tracked in the Learning Management System (LMS).
2. Comply with occupational health policies regarding reporting and contact-tracing of individuals with any COVID-19 symptoms or test-confirmed diagnosis. These include reporting any COVID-19-like symptom to OMS, staying home if/when sick, quarantining or self-isolating as instructed by physicians or after traveling as required by local government.
3. Comply with the safety measures defined in the approved plan specific to their research or administrative group and with NIH policies on face coverings and distancing protocols. This means wearing appropriate masks, cleaning and disinfecting work sites as required and complying with other risk mitigation measures outlined by the supervisor and DOHS.
4. Agree that each and every access of buildings represents an attestation – that one declares themselves symptom-free, consents to the opt-in health policy, and agrees to comply with all safety measures on and between campuses, both inside and outside buildings.

**Supervisor Responsibilities**

1. Develop staffing and spacing usage plans.
2. Review plans with workers and revise as necessary based on feedback.
3. Submit return to work plans for review by ICO leadership.
4. Provide site specific training to all workers prior to reentry on COVID-19 related enhanced practices.
5. Ensure open reporting of safety and health related concerns.
7. Ensure staff are complying with the return-to-work plans, policies and reporting requirements and enforcing these requirements when necessary.

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Employee Name ___________________________ Employee Signature ___________________________ Date ___________________________
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<tr>
<th>Supervisor Name</th>
<th>Supervisor Signature</th>
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