Overview

Companies across all industries and sectors have been affected to some extent during the COVID-19 pandemic. Many were deemed "non-essential" in the United States (U.S.) by state and federal governments, resulting in employers halting operations and closing workplaces. The reopening of office workplaces should be conducted in a thorough manner accounting for several factors before employees are allowed to return. Employers in office settings should not only address preparing the workplace for operations to occur during a pandemic (e.g., enhanced disinfection measures), but also the indoor environmental quality (IEQ) of the workspace. For such businesses with indoor workplaces, IEQ is a concern for buildings that have been unoccupied and/or dormant for extended periods. Employers should also consider the comfort of employees as they return to work because they may be in a heightened state of concern. Putting in place thoughtful measures to ensure employees are well-positioned to transition back to work with minimal disruption is important.

With restrictions beginning to lift, employers are challenged with difficult questions pertaining to preparing the office to reduce the risk of COVID-19 transmission during operations and addressing IEQ concerns before reopening, such as:

- How can I prepare my employees for the heightened policy and guidelines now in place?
- How can I help alleviate stress and concern for employees while at work?
- What should I do to ensure that I am reducing the risk of transmission in common areas?
- How do I address items frequently used by employees (e.g., vending machines, coffee makers, ice machines, etc.)?
- Should I inspect the entire workplace before reopening?
- Should I run my HVAC system for a specific time period prior to reopening?
- How should I investigate odors?
- Should I wait after disinfecting before reopening?

Several measures can be taken to address COVID-19 and IEQ concerns before the workplace is fully reopened. Common approaches to addressing COVID-19 concerns also have the capacity to address IEQ concerns. In addition, IEQ concerns might also develop as operations resume. Therefore, preventative measures can be implemented to address issues that may arise from increased cleaning activities to address COVID-19 concerns. Lastly, all of this can be completed in a manner that allows for critical operations to be performed and reduce the risk of transmitting COVID-19 in the workplace.

This document offers practical guidance for employer and employee led actions and in an office setting. It aims to address the key questions above by providing tips for 1) workplace preparation, 2) workforce management and 3) employee readiness.

WORKPLACE: What should an Employer do to prepare their facility for reopening?

Employers should continually monitor international (World Health Organization), national (U.S. Centers for Disease Control and Prevention), state, and local guidelines for changes in recommendations, cleaning strategies, and other best management practices. For example, general guidelines regarding best practices for specific industries, worker hygiene, cleaning and disinfection, physical distancing, and employee wellness should be reviewed and addressed. Changes to best practices may have an impact on IEQ (e.g., changes in cleaning practices may lead to increased chemical emissions, resulting in a need for ventilation modifications). In
addition to best practices, companies should consider a re-occupancy plan that includes a detailed response plan describing the actions to be taken if someone becomes ill with symptoms consistent with COVID-19 while at work.

Employers should also consider developing a team of professionals to monitor, assess, and implement new COVID-19 transmission risk mitigation strategies as they become available and consider how they relate to IEQ. Aspects to reopening an office that should be emphasized during the pandemic include: workplace configuration, conference rooms, lobby and common areas, kitchens, ventilation, and enhanced cleaning practices. All of these aspects, regardless of workplace sector or size, should be considered to ensure both worker safety and comfort when returning to work during a stressful time.

**General Office Space Configuration**

- Prior to re-occupancy, perform a detailed review of the configuration of your workspaces:
  - Consider eliminating reception seating areas and requesting that guests phone ahead or install a plastic partition at the reception area.
  - Review floorplans and remove or reconfigure seats, furniture and workstations as needed to preserve recommended physical distancing in accordance with guidelines.
  - Reconfigure workstations so that employees do not face each other, or establish partitions if facing each other cannot be avoided.
  - Temporarily replace amenities that are handled with high contact frequency, such as water coolers, coffee makers, and bulk snacks and replace them with alternatives. Examples include: touchless sensor water dispensers; requesting workers bring in their own water bottles/coffee mugs; providing individually wrapped snacks.

- Consider using signage to deter use of such amenities.

- If vending machines are used, provide and require cleaning and disinfectants to wipe down after each use.
  - Reduce tasks requiring large amounts of people to be in one area. Design work to reduce or eliminate trade stacking in the same area.

- Employees should be encouraged to use virtual meeting tools, including phone and virtual teleconference, in lieu of in-person meetings, whenever possible.

- If in-person meetings are essential, consider limiting meetings to 10 people or less depending on local, state, and federal guidelines.

**Conference Rooms**

- Conference rooms that are used should be disinfected on a daily basis at minimum.
  - Disinfectant wipes or spray should be left in each conference room and employees should be encouraged to wipe down all surfaces and equipment (e.g., mouse, keyboard, phone) touched during conference room meetings.

- Consider limiting in-person meetings to 10 people or less, if virtual meetings are not feasible.

- If meetings are to occur in person, they should be conducted in a quick manner.
  - Lingering and socializing before and after meetings should be discouraged.

**Lobby and Common Areas**

- Common areas (e.g., lobby, security check-in) should be cleaned and disinfected on a daily basis at minimum.

- Regulate the use of common areas with clear signage (including maximum occupancy) and physical distancing measures in accordance with public health rules and guidelines.
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Guidance Document

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- Provide cleaning supplies for employees to utilize before/after they use common spaces and contact surfaces.
- Encourage staff not to linger or socialize in common areas.
- If physical distancing is not possible, then partitions can be placed between desks.
- Disinfect all surfaces and commonly touched equipment (e.g., check-in tablets).
- Employers and employees should not provide communal meals to employees, and should not make food available in common areas where employees may congregate.
- In buildings that offer cafeteria-style service or food courts, several protective measures should be implemented. Examples include: reduced capacity, staggered lunch schedules, pick-up only, removal of self-serve food items and dinnerware/drinkware, physical distancing, physical barriers, limiting the number of people who can sit together, enhanced disinfection and sanitization, and touchless payment options.
- At minimum, kitchen areas should be cleaned and disinfected on a daily basis.
- Kitchen equipment should also be cleaned on a routine basis:
  - Coffee machines, refrigerator handles, and the ice machine handles should be disinfected at least three times per day.
  - The outside of dishwashers should be cleaned at the beginning and end of each shift.
  - All silverware and dinnerware should be cleaned in the dishwasher. This helps ensure thorough cleaning and disinfection.
  - Silverware should be stored in a way so that adjacent silverware is not easily touched when a worker is retrieving a piece.
- Ice machines that require a handheld scoop should not be used, as it is difficult to control potential contamination in this case.
- Water/beverage faucets that require workers to operate them with their hands should also be disinfected three times per day.
- If silverware and dishes cannot be kept clean and covered, disposable options are recommended.

Cafeterias

- Consider reducing occupant capacity during peak times, or stagger breakfast/lunch or dinner schedules when practical.
- Consider pick-up only when crowding cannot be managed or as an alternative to those who want to limit their time in the space.
- Remove self-serve food items. Remove hot and cold food bars with open food items and communal serving stations.
- Remove dinnerware/drinkware from communal spaces and only issue as needed.
- Replace communal condiments with single serving, individually wrapped items.
- Implement physical distancing by spacing out any queues, only allowing seating at every other table, or expanding the dining area to include more space.
- Consider implementing physical barriers in between seating.
- Limit the number of people who can sit together.
- Implement enhanced disinfection and sanitization measures both in the kitchen and dining areas.
- Consider adding touchless payment options and pre-ordering of food items.
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• Require gloves for all back of house (BOH) staff and ensure the gloves are changed per current industry standards.

• Although not necessary if hand-washing protocols are rigorously followed, consider providing gloves to servers.
  – If they are worn, they must be changed regularly and are not a substitution for handwashing.

• Require face coverings for BOH staff – type depends on local requirements and availability.

• Provide or encourage all other employees to wear face coverings and gloves, and to use hand sanitizer. (NOTE: Homemade face coverings primarily protect others not yourself).

NOTE: If an employer chooses to provide an N95 respirator, please fully consider all the potential OSHA requirements.

Restrooms

• Doors to multi-stall restrooms should be able to be opened and closed without touching handles if at all possible.
  – Place a trash can by the door if the door cannot be opened without touching the handle.

• For single restrooms, provide signage and materials (paper towels and trash cans) for individuals to use without touching the handles, and consider providing a key so disinfection measures can be better controlled.

• Place signs indicating that toilet lids (if present) should be closed before flushing.

• Place signs asking employees to wash hands before and after using the restroom.

• Provide paper towels and air dryers in restrooms.¹
  – The WHO and CDC currently state that hands can be dried using a paper towel or hand dryer.

  – Due to current uncertainties surrounding the transmission of SARS-CoV-2, care should be taken when using a hand dryer or paper towel.

  – The use of touch or push hand dryers is discouraged due to possible surface contamination. If hand dryers are used, consider touchless devices.

  – Businesses and employers should work with HVAC professionals to ensure that bathrooms are well ventilated.

• Double efforts to keep bathrooms clean and properly disinfected.

Ventilation

• Ensure there is an adequate flow of fresh air to workspaces and optimize the ventilation system settings. Some ways to do this are:
  – Maximize fresh air through your ventilation system.

  – Ensure restroom is under negative pressure.

  – Ensure that the proper filtration is being used for not only normal office use but also what is recommended to control SARS-CoV-2 transmission.

  – Clean and disinfect all HVAC intakes and returns daily.

  – Consider seeking an HVAC professional and see ASHRAE updates for more information.

  – If fans such as pedestal, desk or hard mounted fans are used, take steps to minimize air from fans blowing from one person directly to another. NOTE: A desk fan is capable of creating an airflow which can still have an effect on smaller droplets. While the droplets might not spread as far via a desk fan, depending on the office configuration and fan direction, they can still spread to nearby individuals.

¹NOTE VERSION CHANGE: In version 3 of this guidance document, in the section titled “Restrooms” it stated to disconnect or tape off the hand dryer.
Enhanced Cleaning Practices

- Select appropriate disinfectants – consider effectiveness and safety.
  - The U.S. Environmental Protection Agency (EPA) has developed a list of products that meet EPA’s criteria for use against SARS-CoV-2.
  - Review product labels and Safety Data Sheets and follow manufacturer specifications.
  - Consider consulting industrial hygiene experts if additional advice is needed.
- Establish a disinfection routine.
  - Ensure disinfection protocols follow product instructions for application and contact time.
  - All contact surfaces should be disinfected regularly, including:
    > Individual workspaces between each shift.
    > Common area contact surfaces between each use. Examples of commonly touched surfaces in office settings include:
      - Door handles
      - Elevator buttons
      - Bathroom surfaces
      - Kitchen appliances and surfaces
      - Sign-in areas
      - Common office electronics (e.g., phone, printer, keyboard, mouse, and personal devices)
  - Use disposable products when possible.
  - If reusable products are used, ensure that these products are maintained, handled and cleaned per product instructions.
  - Consider using a checklist or audit system to track when and how cleaning is conducted.
- Remove items and personal effects from surfaces to facilitate surface cleaning.
  - Request that occupants remove items from desks and other surfaces before leaving work each day.
  - Identify items with likely surface contact that are difficult to clean and remove or replace with alternatives.

Indoor Environmental Quality (IEQ) Considerations

Employers and business owners may find that they are having to deal with IEQ issues because workplaces have not been occupied or maintained in response to stay-at-home orders. AIHA has previously developed guidance for COVID-19-related building closures. As a major factor in employee comfort in office settings, IEQ issues are also discussed below.

Common IEQ issues include:

- Water damage
- Odors
- Pests and rodents
- Irritation from cleaners and disinfectants
- Employees feeling ill while at work
- Ensuring proper ventilation during the pandemic
- Varying pressures across workplace
- Humidity and temperature at an uncomfortable setting

Temperature and Humidity

- Ensure that temperature and humidity are set at range that are comfortable for most people. Some ways to do this are:
  - Maintain temperature at 68.5-75°F in the winter, and from 75-80.5°F in the summer.
  - Inspect windows and doors prior to reopening to ensure that leaks are not present.
  - Maintain relative humidity at 40-60%.
  - Ensure there is no standing water in the workplace.
Odors
- If odors are present prior to reopening, then facility management or a consultant should be contacted before investigating.
- If odors are noticed in a workplace where chemicals are stored, then a safety professional should be consulted.
- Common sources of odors can be due to:
  - P-traps in plumbing system
  - Carpet and furnishing off-gassing
  - Garbage/trash
  - Rodents and pests
  - Water intrusion
  - Refrigerator malfunction and drip pans
  - Unattended plants
  - Spoiled foods

Water Damage
- During workplace inspections, employers should ensure that water damage or standing water is not present. Signs of water damage include:
  - Stained ceiling tile
  - Bubbling paint
  - Carpet damage
  - Buckled floor
- Water damage can lead to mold growth that can contribute to adverse health effects if employees are exposed.
- If water damage is discovered, facilities management or a consultant should be contacted.
- If standing water is located, then water should be drained in a safe manner as soon as possible.
  - If the source of water is not obvious or located in a hazardous area, then facilities management or a consultant should be contacted.
- Areas where water intrusion may occur:
  - Behind sinks
  - Refrigerators
  - Ice machines
  - Vending machines
  - Centralized plumbing rooms
  - Toilets
  - Water fountains
  - Windows and doors
  - Crawlspace

Waste
- Outdoor and indoor waste areas should be inspected to ensure that waste was removed prior to shut down and quarantine measures were implemented.
- If waste remained in or around the workplace during shutdown, then rodents, pests, and opportunistic microbes may be present.
  - Facilities management or a consultant should be notified to clean up infested waste while wearing the appropriate Personal Protective Equipment (PPE).
- If odors produced from waste are present, then it is recommended to either adjust ventilation accordingly or open window and doors.
- Employers should be aware the waste pickup schedules may be altered, delayed, or rescheduled during the pandemic response.
- Employers are discouraged from attempting to “cover up” odors using products that produce a fragrance as employees may have an adverse reaction upon exposure.

HVAC Maintenance
- Specific PPE for HVAC professionals and technicians depends on the exact task they are perform-
ing. HVAC professionals can be exposed to electrical hazards, chemical hazards, biological hazards, various respiratory risks, confined spaces, use of machine power tools, and general maintenance work. It is important to perform a Job Hazard Analysis prior to beginning the task.

- It is recommended that all maintenance workers working on ventilation systems wear a Tyvek jumpsuit (possibly with hood), eye protection (safety glasses or goggles), gloves, and an N95 respirator.
- Workers should be properly trained on all hazards associated with their tasks. They should be shown how to put on and take off suits and respirators without cross-contaminating themselves. They should be trained on cleaning and disinfecting protocols, as well as general HVAC training prior to starting any tasks.

- Additional resources for consideration:
  - National Air Duct Cleaners Associations (NADCA) provides HVAC cleaning system service guidance. OSHA provides Legionella control and prevention guidance as well as guidance on mold in the workplace.
  - For Legionella, OSHA provides PPE recommendations for routine maintenance, cleaning, and disinfection of HVAC systems. OSHA provides a guide to mold in the workplace.

**WORKFORCE: What should an Employer do to prepare their employees for reopening?**

During the reopening process, employers should also consider how they will prepare their workforce. Aspects such as communication, training, and employee comfort are important to have in mind during development of the reopening plan to address employee.

**Communication**

- Adopt a communication policy that emphasizes transparency that is customized to your organization.
  - Communicate to employees what is being done to mitigate the spread of COVID-19 (e.g., disinfection routine, health policies for staff, and health & safety measures in place).
  - Establish formal and informal routes of communication for employees to express concerns, questions, comments, and feedback as it relates to IEQ.
  - Ensure that supplemental information on cleaning and disinfectant products are included in organization’s hazard communication (HAZCOM) training.
- Communicate that employers may limit office hours and close-off or prohibit public access if needed.
- Employers should explore work-from-home options, staggering work shift/hours, and other flexible approaches for employees.
- If the workplace is located in a multi-tenant location, consider establishing a communication pathway with other tenants to inform of confirmed COVID-19 cases present in the building.
  - Tenants should also communicate IEQ concerns and response with one another to ensure all systems are in agreement and balanced (e.g., HVAC systems can be shared by multiple tenants, therefore adjusting the system in one area may have negative effects in another area).
- Platforms for communicating with employees could include emails, texts, automated phone calls, texts, websites, and signage.

**Training**

- Employers should notify employees of new workplace policies and changes prior to reopening and upon resuming operations.
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- Train employees on new or modified working schedules, how they can stay up to date on new scheduling requirements, and how to make requests for schedule changes if a need arises.

- Employees should receive, at minimum, awareness training on cleaning and disinfection products used in the workplace following OSHA Hazard Communication Standards. For employees who will use disinfectants and cleaners, training should also include proper use, PPE, disposal and all precautionary measures.

- Health checks and reporting requirements of individuals infected with COVID-19 should be explained to employees prior to reopening and again once operations have resumed.
- Employees should evaluate their health constantly; if they are sick, have a fever, symptoms, or someone at home is sick then they should remain home. NOTE: Employer HR Policies, HIPAA guidelines and other laws should be followed at all times.

- At minimum, employees should wash their hands upon arrival to work, after touching their face or mask or any common contact surfaces, and when leaving work.

- If employees get the urge to sneeze or cough, they should cover their nose, mouth, and mask with a towel or handkerchief.

- Employees should wash their hands and face thoroughly immediately after.

- Other Control Measures
- If 6 ft physical distance cannot be maintained or in accordance with any local, state or federal guidelines, provide or encourage employees to wear face coverings, gloves, shoe covers and use hand sanitizer. (NOTE: Homemade face coverings primarily protect others not yourself).

NOTE: If an employer chooses to provide an N95 respirator, please fully consider all the potential OSHA requirements.

Employee Comfort

- Prior to reopening, consider flexible work schedules, work from home options, and anticipate a hesitant and potentially uncomfortable workforce.

- Ensure that the workspace is welcoming and well-prepared for employee occupancy.

- All aspects described above should be addressed prior to reopening and on a routine basis after the returning to work.

- Ensuring employee comfort helps instill confidence in management and employer during a stressful time.

- Management and leadership are encouraged to continuously check-in with employees to ensure that all concerns are heard, understood, and addressed (see Communication section above).

- Ensure all protective measures and supplies are available prior to occupancy (e.g., demarcate floors that have access to the public, rearrange office layout to increase distance between employees, provide adequate hand washing/hand sanitizer supplies, etc.).
- Employee awareness of preparation measures and supplies contributes directly to the comfort employees can experience in the workplace.

employees: What should an employee do to prepare to go back to the office?

- Ask employers of new workplace policies, training and other changes related to all of the above topics.

- Evaluate your health constantly; if you are sick, have a fever, symptoms, or someone at home is sick then you should remain home. NOTE: Employer HR Policies, HIPAA guidelines and other laws should be followed at all times.

- At minimum, you should wash your hands upon arrival to work, after touching your face or face covering, any common contact surfaces and when leaving work.
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If you get the urge to sneeze or cough, you should cover your nose, mouth, and mask with a towel or handkerchief.

You should wash your hands and face thoroughly immediately after sneezing or coughing.

Other Control Measures

At all times, wear a face covering or something better if you have it.

Let your employer know if you have concerns about the PPE that may be provided to you and that you are properly instructed on how to use it.

If you are using the office cafeteria, please consider:

Use take-out/pick-up services where you can.

Wear a face covering as you enter and leave the building.

Wash your hands before and after you leave the cafeteria if possible. If not, use hand sanitizer when you sit down and before you leave the building.

Maintain a distance of at least 6 feet from other customers and employees when waiting for a table and when walking throughout the cafeteria to the extent possible.

Attempt to delay the urge to sneeze or cough if possible; carry a disposable towel or handkerchief towel, so if you get the urge to sneeze or cough, cover your nose, mouth and mask with it and then, attempt to delay the urge to sneeze or cough, immediately leave the premises to wash your hands and face thoroughly before seating back down.

Resources

Building Owners & Managers Association International (BOMA).

EPA has developed a list of disinfectants for use against SARS-CoV-2.

ASHRAE has a list of COVID-19 resources for addressing HVAC challenges in workplaces during the pandemic.

OSHA provides resources discussing IAQ and related topics for workplaces.

NIOSH provides a centralized resource for discussions around IEQ in the workplace.

AIHA’s Indoor Environmental Quality Committee developed these guidance documents about reopening and cleaning buildings after closures due to COVID-19: Recovering from COVID-19 Building Closures and Workplace Cleaning for COVID-19.
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