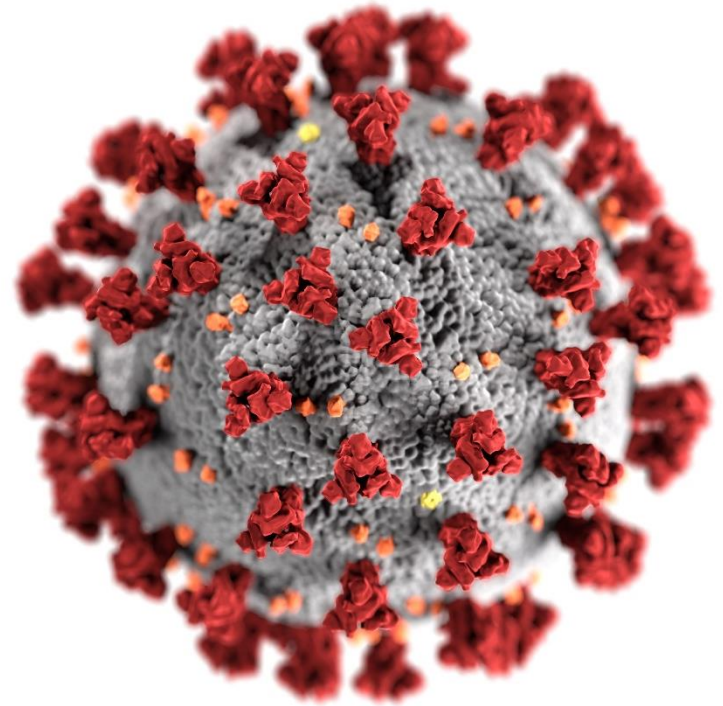


Virtual Occupational Technical Assistance (VOTA)

Review of “Manufacturing Workers and Employers - Interim Guidance from the Centers for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA)”



cdc.gov/coronavirus

Manufacturing Industries and Industrial Facilities

- Apparel and Footwear
- Battery Manufacturing
- Chemical Manufacturing
- Concrete and Concrete Products
- Fireworks
- Food Processing
- Lead Smelters
- Lubricant Manufacturing
- Metal Manufacturing
- Plastics Industry
- Furniture Manufacturing
- Automobile Manufacturing
- Printing Industry
- Pulp, Paper, and Paperboard Mills
- Semiconductor Industry
- Textiles
- Wood Product Industry



Note: This list is not exhaustive. This guidance may apply to other types of manufacturing activities. Guidance for workers and employers in [meat and poultry processing](#), which is often considered a manufacturing industry, is provided separately.

Presentation overview

- **SARS-CoV-2 Exposure Risk**
- **COVID-19 Assessment and Control Plan**
 - Engineering Controls
 - Administrative Controls
 - Personal Protective Equipment
 - Cloth Face Coverings
 - Education and Training
 - Cleaning and Disinfection
- **Managing Workforce**
 - Screening and Monitoring Workers
 - Managing Sick Workers
 - Return to Work
 - Workers' Rights



Disclaimer

- The information covered in these slides is not exhaustive, and it is meant to convey the critical information manufacturing facilities should use when developing plans for continuing operations in the setting of COVID-19 occurring among workers, or in the surrounding community
- For full guidance and information, please consult the Interim Guidance from CDC and OSHA on Manufacturing Workers and Employees www.cdc.gov/coronavirus/2019-ncov/community/guidance-manufacturing-workers-employers.html
- The information in this presentation is current as of June 8, 2020



Background on Coronavirus Disease 2019 (COVID-19)

- COVID-19 is a respiratory illness caused by the SARS-CoV-2 virus
- Symptoms may appear 2–14 days after exposure to the virus and may include:
 - Fever or chills
 - Cough
 - Shortness of breath or difficulty breathing
 - Fatigue
 - Muscle or body aches
 - Headache
 - New loss of taste or smell
 - Sore throat
 - Congestion or runny nose
 - Nausea or vomiting
 - Diarrhea
- Range of severity



Background on COVID-19

■ Transmission

- Mainly person to person through respiratory droplets from an infected person when they cough, sneeze, or talk
- Between people in close contact (within about 6 feet apart) for prolonged periods*
- Possibly by touching contaminated surface or objects then touching mouth, nose, or possibly eyes
- Current information about spread supports the need for social distancing and other protective measures

■ People who are at higher risk for severe illness include:

- Older adults (≥ 65 years old)
- Individuals with underlying medical conditions



*Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. Recommendations vary on the length of time of exposure, but 15 min of close exposure can be used as an operational definition.

Exposure risk among manufacturing workers

- Distance between workers
 - Working close together (<6 feet) on the processing line
 - Shared spaces such as break rooms, locker rooms, and entrances/exits
 - Shared transportation to/from work
 - Frequent contact in community settings
- Duration of contact
 - Prolonged* closeness to coworkers
 - Workers often work 8–12 hours per shift



*Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. Recommendations vary on the length of time of exposure, but 15 min of close exposure can be used as an operational definition.

Exposure risk among manufacturing workers

- Type of contact
 - Inhalation of respiratory droplets in the air – for example, when workers in the plant who have the virus cough or sneeze (main source of exposure)
 - Contact with contaminated surfaces or objects, such as tools, workstations, or break room tables



Create a COVID-19 Assessment and Control Plan

- Identify a qualified Workplace Coordinator (likely Environmental Health and Safety officer)
 - Responsible for creating a COVID-19 assessment and control plan
 - Coordinates with state/local public health and occupational safety and health professionals
 - Knowledgeable of public health guidelines and federal regulations

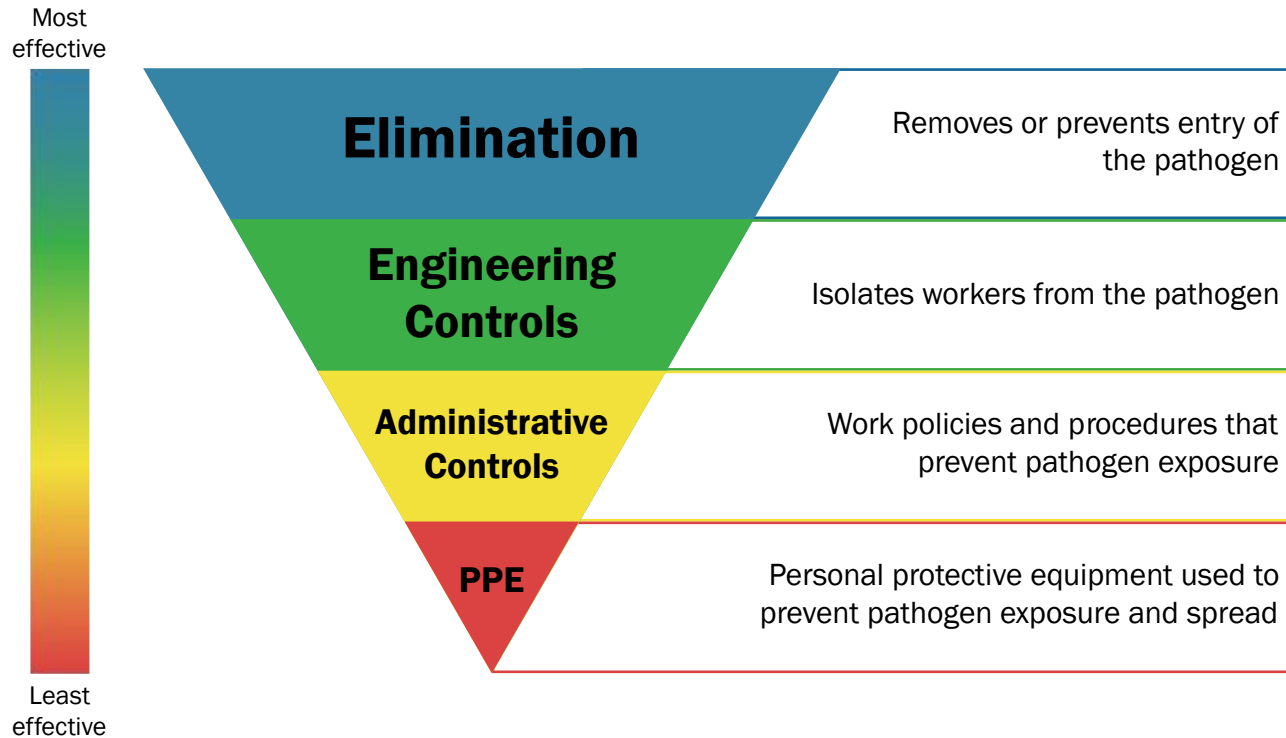


Create a COVID-19 Assessment and Control Plan

- Workplace Assessment
 - Conduct initial hazard and risk assessment following the exposure risk factors and exposure routes
 - Conduct periodic (e.g., weekly, monthly, quarterly) hazard assessments to identify risks and prevention strategies
 - Consider the role of COVID-19 testing and contact tracing of positive workers



Create a COVID-19 Assessment and Control Plan: Identify Controls



Adapted from: www.aaha.org/aaha-guidelines/infection-control-configuration/infection-control-strategies/

Examples of Engineering Controls

- Modify workstation to maintain at least 6 feet separation among workers in all directions (e.g., side-to-side and when facing one another)
- Ideally, modify the alignment of workstations so that workers do not face one another
- Use markings and signs as reminders to maintain location and practice social distancing (staying 6 feet or more apart)

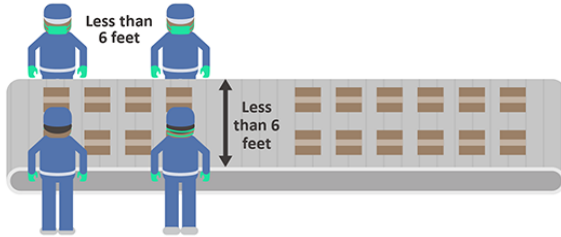


Examples of Engineering Controls

How to Align Manufacturing Work Stations, If Feasible

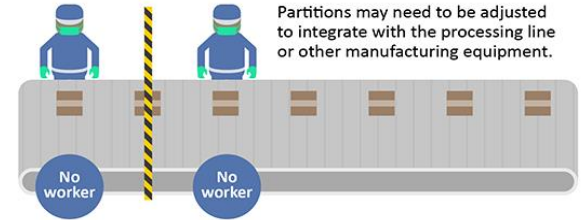
Bad:

Workers are within six feet of one another, including at side-by-side or facing workstations.



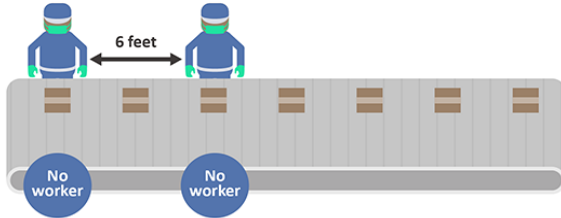
Good:

Physical barriers, such as partitions, separate workers from each other.



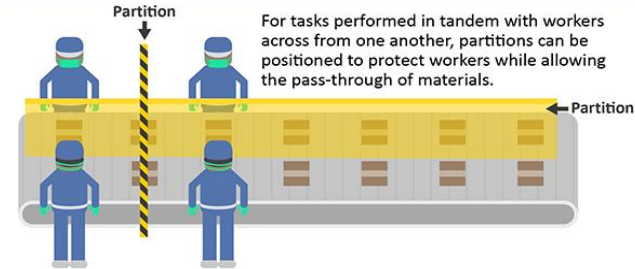
Good:

Workers are spaced at least six feet apart, not facing one another. Another setup may be used to achieve similar distancing between workers.



Good:

Physical barriers, such as partitions, separate workers from each other, including where workers need to perform tasks in tandem across from one another.



For tasks performed in tandem with workers across from one another, partitions can be positioned to protect workers while allowing the pass-through of materials.

Examples of Engineering Controls

- Use **physical barriers** between workers such as strip curtains, plexiglass or similar materials, or other impermeable dividers or partitions to separate workers from each other, if feasible
- Provide **adequate ventilation** in work areas; consult with a qualified heating, ventilation, and air conditioning engineer
- **Remove personal cooling fans** and take steps to minimize air from other fans from blowing from one worker to another; take alternate steps to prevent heat hazards associated with the removal of fans



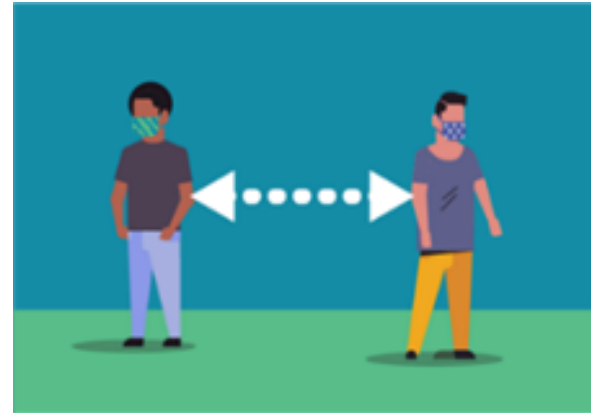
Examples of Engineering Controls

- Install handwashing or (touch-free) hand sanitizer ($\geq 60\%$ alcohol) stations in multiple locations
- Add additional clock in/out stations, or stagger times for workers to clock in/out to reduce crowding
- Increase worker separation and ability to distance by
 - Removing or rearranging chairs and tables in break rooms and other common areas
 - Identifying other areas such as training or conference rooms or using outside tents for break and lunch areas to accommodate overflow volumes



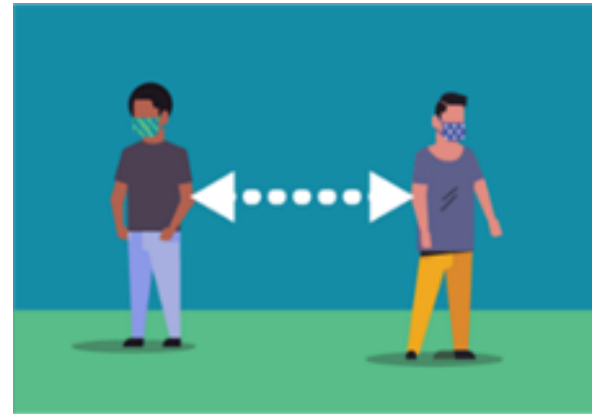
Examples of Administrative Controls to Promote Social Distancing

- Encourage single-file movement with workers separated by at least six feet
- Designate workers to facilitate social distancing on floor lines
- Provide floor markings and signs (visual cues)
- Stagger break times, arrival/departure times to minimize groups in parking areas, locker rooms, or around time clocks



Examples of Administrative Controls to Promote Social Distancing

- In the setting of COVID-19, encourage workers to avoid carpooling to and from work (if possible)
- If carpooling, practice social distancing, hand hygiene, mask use, [disinfection](#)
- Modify process or production lines, shifts schedules, and stagger shifts
 - Add shifts (1 shift may turn into 2 or 3 split shifts)
 - Reserve one shift for cleaning



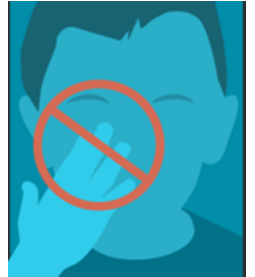
Examples of Administrative Controls

- Monitor and respond to absenteeism; implement plans to continue essential business functions in cases of higher than usual absenteeism
- Review leave and incentive policies to ensure
 - Ill workers are not in the workplace
 - Employees are aware of and understand policies
 - Employees are not penalized for taking sick leave if they have COVID-19
 - Policies are flexible (e.g., give advances on future sick leave, or allow for donating sick leave to others)



Examples of Administrative Controls

- Consider cohorting (grouping) workers
 - Increases effectiveness of shift schedules
 - Minimizes number of different individuals in close contact
 - May reduce the number of workers exposed if a worker is sick
- Establish system for workers to alert supervisors if experiencing signs or symptoms of COVID-19 or if a recent close contact
- Educate workers to avoid touching their face (eyes, nose, mouth) especially with unwashed hands or after removing PPE



Examples of Administrative Controls

- Provide workers access to soap, safe running water, and single use paper towels for handwashing
 - Alcohol-based hand sanitizers (minimum 60% alcohol) if soap/water not immediately available
 - Multiple locations and touch-free
- Consider workplace programs to promote personal hygiene
 - Additional and longer breaks to increase handwashing or hand sanitizer use
 - Tissues and touch-free trash receptacles
 - Educate on avoiding tobacco products



Examples of personal protective equipment (PPE)

- Conduct hazard assessment to determine the need for PPE
- Follow OSHA PPE standard ([29 CFR Subpart I](#))
- Use videos or in-person visual demonstrations of how to properly put on and take off PPE; maintain social distancing during these demonstrations



Examples of personal protective equipment (PPE)

- Emphasize that care must be taken when putting on and taking off PPE to ensure that the worker does not become contaminated
- Provide PPE that is either disposable (preferred) or, if reusable, ensure it is properly disinfected and stored in a clean location when not in use
- PPE worn at the facility should not be taken home or shared



Examples of personal protective equipment (PPE)

- Face shields may serve as both PPE and source control
 - Face shields can provide additional protection from both potential process-related splashes and potential person-to-person droplet spread
- Face shields can help minimize contamination of masks and cloth face coverings
 - Clean and decontaminate after each shift, and when not in use they should be kept in a clean location at the work facility
 - Face shields should wrap around the sides of the wearer's face and extend to below the chin



Examples of personal protective equipment (PPE)

- Stress hand hygiene before and after handling all PPE
- Always consider whether PPE is necessary to protect workers
 - When engineering and administrative controls are difficult to maintain and there may be exposure to other workplace hazards, such as splashes or sprays of liquids on processing lines or disinfectants used for facility cleaning



Examples of personal protective equipment (PPE)

- Consider voluntary use of filtering facepiece respirators (such as an N95, if available) for workers during COVID-19 outbreak
- Determine if PPE such as gloves, face and eye protection, and other types of PPE may be needed when cleaning and disinfecting
- Consider additional hazards created by poorly fitting PPE with respect to the work environment (e.g., machinery in which PPE could get caught)



Cloth face coverings



- A cloth face covering may reduce the amount of large respiratory droplets that a person spreads when talking, sneezing, or coughing; cloth face coverings are intended to protect other people—not the wearer.
- Cloth face coverings are a protective measure, in addition to social distancing, and are especially important when social distancing is not possible or feasible.
- Cloth face coverings are not PPE and not a replacement for respiratory protection when respirators are needed.
- Cloth face coverings should not be worn by anyone with trouble breathing or people who cannot remove the covering without assistance.

Cloth face covering considerations

Employers who determine that cloth face coverings should be worn in the workplace, should ensure the cloth face coverings:

- Fit over nose and mouth and fit snugly but comfortably against the side of the face
- Are secured with ties or ear loops and include multiple layers of fabric
- Allow for breathing without restriction
- Are not used if they become wet or contaminated; and are replaced with clean replacements, provided by employer, as needed
- Are handled as little as possible
- Can be laundered daily after the shift, without damage or change to shape (a clean cloth face covering should be used each day)



Educate and train workers and supervisors

- Material should be easily understood and contain accurate and timely information, in preferred languages spoken or read by the workers, at appropriate literacy levels.
- Topics could include:
 - Recognizing COVID-19 symptoms, spread, risk at work, and ways to prevent exposure to the virus including social distancing
 - Proper handwashing and hand sanitizer use
 - Cough and sneeze etiquette
 - Infection control measures



Educate and train workers and supervisors

- Place posters at building entrance, break and common areas, and locker rooms on COVID-19 recognition and prevention
- Posters should be legible at a distance and in languages workers prefer



Cleaning and disinfection

- Clean and disinfect tools and equipment regularly; as often as workers change workstations or move to new tools
- Use EPA-registered disinfectants that are effective against SARS-CoV-2; [List N: Disinfectants for Use Against SARS-CoV-2](#)
- For Food and Drug Administration (FDA) regulated industries, work with FDA staff to ensure compliance with food safety standards



Cleaning and disinfection

- Establish protocols and provide supplies to disinfect tools, equipment, and frequently-touched surfaces in workspaces and common areas (e.g., door handles, handrails and barriers, bathroom faucets and surfaces) at least once per shift
- If needed, provide cleaning and disinfection workers with additional PPE and other controls (to comply with applicable OSHA regulations) to protect them against chemical hazards
- Ensure hazard communication program and training are in place



Screening and monitoring workers

- Policies and procedures for screening workers should be developed in consultation with state and local health officials and occupational medicine professionals.
- Options to screen workers include:
 - Screen prior to entry into the facility
 - Provide verbal screening in appropriate language(s) to determine whether workers have had symptoms such as a fever, felt feverish or had chills, coughing, difficulty breathing in the past 24 hours, or other [symptoms](#)
 - Check temperatures of workers at the start of each shift to identify anyone with a fever of 100.4°F or greater



Managing sick workers

- Do not let employees enter the workplace if screening results indicate COVID-19 symptoms.
- Encourage workers to self-isolate and contact a healthcare provider.
- Provide information on the facility's return-to-work policies and procedures.
- Inform human resources, employer health unit (if in place), and supervisor (so worker can be moved off schedule during illness and a replacement can be assigned, if needed).



Protect personnel performing screening activities

- Use engineering controls like barriers, dividers, or rope and stanchion systems to maintain at least six feet of distance between screeners and workers being screened.
- If screeners need to be within six feet of workers, provide screeners with appropriate PPE:
 - May include gloves, a gown, a face shield, and, at minimum, a face mask
 - N95 filtering facepiece or more protective filtering facepiece respirators may be appropriate to protect screeners from employees who have signs or symptoms of COVID-19



Managing sick workers

- Workers with symptoms on arrival or who become sick during the day should be separated from others at work and sent home
- Disinfect the workstation and tools of the symptomatic/sick worker
- If a worker is confirmed to have COVID-19:
 - Inform all their work contacts of possible exposure while maintaining confidentiality as required by the Americans with Disabilities Act (ADA)
 - Provide guidance to fellow workers on how to proceed based on [CDC Public Health Recommendations for Community-Related Exposure](#)



Managing sick workers

- Work with state, local, tribal and/or territorial health officials to help identify exposed and potentially exposed individuals (contacts), like coworkers
- Ensure on-site healthcare personnel follow appropriate CDC and OSHA guidance for healthcare and emergency response personnel
- Maintain confidentiality as required by ADA.



Return to work – Critical infrastructure employers

- Follow [CDC Critical Infrastructure Guidance](#) when reintegrating (bringing back) exposed, asymptomatic workers to on-site operations.
 - Employers may permit workers who have been exposed to COVID-19, but remain without symptoms, to continue to work, provided they adhere to additional safety precautions.
 - Consult with an occupational health provider and state and local health officials to develop the most appropriate plan consistent with CDC guidance.



Return to work – Critical infrastructure employers

- Follow the CDC Interim Guidance, [Discontinuation of Isolation for Persons with COVID-19 Not in Healthcare Settings](#) when reintegrating workers with COVID-19 (COVID-19 positive), including those workers who have remained asymptomatic, to on-site operations



Workers' rights

- OSH Act prohibits retaliating against workers for raising concerns about safety and health conditions
- Whistleblower protection program enforces many federal laws to protect workers from retaliation for raising or reporting concerns



Workers' rights

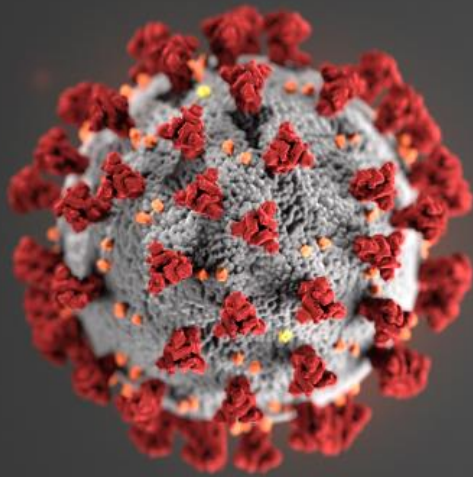
- OSHA encourages employees to submit complaints to OSHA within legal time limit; there are multiple ways employee can file a complaint with OSHA
- OSHA provides recommendations to assist employers on how to respond to worker complaints about workplace hazards, and create workplaces that are free of retaliation



Information resources

- Manufacturing Workers and Employers: Interim Guidance from CDC and the Occupational Safety and Health Administration (OSHA)
www.cdc.gov/coronavirus/2019-ncov/community/guidance-manufacturing-workers-employers.html
- Implementing Safety Practices for Critical Infrastructure Workers Who May Have Had Exposure to a Person with Suspected or Confirmed COVID-19
www.cdc.gov/coronavirus/2019-ncov/community/critical-workers/implementing-safety-practices.html





For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



Notes

Slide 11, Create a COVID-19 Assessment and Control Plan: Identify Controls

Worker infection prevention recommendations are based on an approach known as the hierarchy of controls. This approach groups actions by their effectiveness in reducing or removing hazards. In most cases, the preferred approach is to eliminate a hazard or processes; install engineering controls; and implement appropriate cleaning, sanitation, and disinfection practices to reduce exposure or shield workers. Administrative controls are also an important part of an approach to prevention in these workplaces.

Slide 18, Examples of Administrative Controls

Employers may determine that modifying processing or production lines, shifts, and staggering workers across shifts would help to maintain overall manufacturing capacity while measures to minimize exposure to SARS-CoV-2/COVID-19 [COVID-19 added for your consideration] are in place. For example, a plant that normally operates on one daytime shift may be able to split workers into two or three shifts throughout a 24-hour period. In manufacturing plants, one shift may need to be reserved for cleaning and sanitization.

Monitor and respond to absenteeism at the workplace. Implement plans to continue essential business functions in cases of higher than usual absenteeism.

Review leave and incentivize policies:

- Analyze sick leave policies and consider modifying them to make sure that ill workers are not in the workplace. Make sure that employees are aware of and understand these policies.
- Analyze any incentive programs and consider modifying them, if warranted, so that employees are not penalized for taking sick leave if they have COVID-19.
- Additional flexibilities might include giving advances on future sick leave and allowing employees to donate sick leave to each other.

Slide 20, Examples of Administrative Controls

Provide workers access to soap, clean running water, and single use paper towels for handwashing.

Provide alcohol-based hand sanitizers containing at least 60% alcohol if soap and water are not immediately available.

Place hand sanitizers in multiple locations to encourage hand hygiene. If possible, choose hand sanitizer stations that are touch-free.

Consider other workplace programs to promote personal hygiene, such as:

- building additional short breaks into staff schedules to increase how often staff can wash their hands with soap and water or use hand sanitizers with at least 60% alcohol;
- providing tissues and no-touch trash receptacles for workers to use; and
- educating workers that cigarettes and smokeless tobacco use can lead to increased contact between potentially contaminated hands and their mouth, and that avoiding these products may reduce their risk of infection.

Slides 32 and 33, Screening and Monitoring Workers

Workplaces, particularly in areas where community transmission of COVID-19 is occurring, should consider developing and implementing a comprehensive screening and monitoring strategy aimed at preventing the introduction of COVID-19 into the worksite. Consider a program of screening workers before entry into the workplace, criteria for return to work of exposed and recovered (those who have had signs or symptoms of COVID-19 but have gotten better), and criteria for exclusion of sick workers. This type of program should be coordinated to the extent possible with local public health authorities and could consist of the activities presented on the slides.

Slides 37 and 38, Return to work – Critical Infrastructure Employers

<https://www.cdc.gov/coronavirus/2019-ncov/community/critical-workers/implementing-safety-practices.html>

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html>

Slides 39 and 40, Workers' Rights

Section 11(c) of the Occupational Safety and Health Act of 1970, 29 USC 660(c), prohibits employers from retaliating against workers for raising concerns about safety and health conditions. Additionally, OSHA's Whistleblower Protection Program enforces the provisions of more than 20 industry-specific federal laws protecting employees from retaliation for raising or reporting concerns about hazards or violations of various airline, commercial motor carrier, consumer product, environmental, financial reform, food safety, health insurance reform, motor vehicle safety, nuclear, pipeline, public transportation agency, railroad, maritime, securities, and tax laws. OSHA encourages workers who suffer such retaliation to submit a complaint to OSHA as soon as possible in order to file their complaint within the legal time limits, some of which may be as short as 30 days from the date they learned of or experienced retaliation. An employee can file a complaint with OSHA by visiting or calling his or her local OSHA office; sending a written complaint via fax, mail, or email to the closest OSHA office; or filing a complaint online. No particular form is required, and complaints may be submitted in any language.

OSHA provides recommendations intended to assist employers in creating workplaces that are free of retaliation and guidance to employers on how to properly respond to workers who may complain about workplace hazards or potential violations of federal laws. OSHA urges employers to review its publication Recommended Practices for Anti-Retaliation Programs.

1 Employers should evaluate the burdens and benefits of recording workers' temperatures or asking them to complete written questionnaires. These types of written products become records that must be retained for the duration of the workers' employment plus 30 years. See OSHA's Access to Employee Exposure and Medical Records standard (29 CFR 1910.1020).