Interim Guidance for Manufacturing Facilities
August 7, 2020

Governor Cooper has implemented a phased approach to slowly lift restrictions while combatting COVID-19, protecting North Carolinians and working together to recover the economy.

This guidance, adapted from the Centers for Disease Control and Prevention's (CDC's) Guidance for Manufacturing Workers and Employers, provides steps manufacturing facilities should take to prevent the spread of COVID-19.

Guidelines for Manufacturing Facilities: Any scenario in which many people gather together poses a risk for COVID-19 transmission. All businesses and agencies that congregate people in an enclosed space should create and implement a plan to minimize the opportunity for COVID-19 transmission at their facility. The guidance below will help manufacturing facilities reduce the spread of COVID-19 in their communities. CDC has developed one-page flyers with recommendations and strategies for preventing the spread of COVID-19 in manufacturing facilities: key strategies for employers to prevent COVID-19 infection among employees and tips for employees to protect themselves and other from COVID-19 at work and at home. The fliers are available in multiple languages on CDC's website.

This guidance covers the following topics:

- Exposure Risk Among Manufacturing Workers
- Social Distancing and Minimizing Exposure
- Cloth Face Coverings
- Cleaning and Hygiene
- Personal Protective Equipment
- Monitoring for Symptoms
- Addressing Return to Work
- Protecting Vulnerable Populations
- Communications and Combatting Misinformation
- Water and Ventilation Systems
- Additional Resources

Exposure Risk Among Manufacturing Workers

The manufacturing work environment—production or assembly lines and other areas in busy plants where workers have close contact with coworkers and supervisors—may contribute substantially to workers' potential exposures. The risk of occupational transmission of COVID-19 depends on several factors including:

- ❑ Distance between workers – Manufacturing workers often work close to one another on production or assembly lines. Workers may also be near one another at other times, such as when clocking in or out, during breaks, or in locker/changing rooms.

❑ Duration of contact – Manufacturing workers often have prolonged closeness to coworkers (e.g., for 8–12 hours per shift). Continued contact with potentially infectious individuals increases the risk of COVID-19 transmission.

❑ Type of contact – Manufacturing workers may be exposed to the infectious virus through respiratory droplets in the air—for example, when workers in a plant who have the virus cough or sneeze. It is also possible that exposure could occur from contact with contaminated surfaces or objects, such as tools, workstations, or break room tables. Shared spaces such as break rooms, locker rooms, and entrances/exits to the facility may contribute to their risk.

❑ Other distinctive factors that may increase risk among these workers include:
   o A common practice at some workplaces of sharing transportation such as ride-share vans or shuttle vehicles, car-pools, and public transportation.
   o Frequent contact with fellow workers in community settings in areas where there is ongoing community transmission.

All manufacturing facilities should create plans for continuing operations in the setting of COVID-19 occurring among workers or in the surrounding community. Plans should:

❑ Include an assigned qualified workplace coordinator responsible for COVID-19 assessment and control planning. All workers in the facility should know how to contact the identified coordinator with any COVID-19 concerns.

❑ Involve state and/or local public health officials and occupational safety and health professionals and establish ongoing communications to make sure they are getting relevant and up-to-date information concerning COVID-19.

❑ Comply with all federal regulations and public health agency guidelines.

❑ Include a process for periodic work site assessments to identify COVID-19 risks and prevention strategies- including processes for testing and workplace contact tracing (identifying person-to-person spread) of COVID-19 workers who tested positive in a work site risk assessment, following available CDC guidance.

Social Distancing and Minimizing Exposure

Social distancing is one of the few tools we currently have to decrease the spread of COVID-19. Social distancing ("physical distancing") means keeping space between yourself and other people outside of your home. Stay at least 6 feet (about 2 arms' length) from other people; do not gather in groups; stay out of crowded places and avoid mass gatherings.

It is recommended that manufacturing facilities:

❑ Configure the work environment to facilitate social or physical distancing among workers wherever possible.

❑ Modify the alignment of workstations, including along production or assembly lines, if feasible, so that workers are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another), when possible. Ideally, modify the alignment of workstations so that workers do not face one another (Refer to diagram below titled "How to Align Manufacturing Workstations, If Feasible").

❑ Provide visual cues (e.g., floor markings, signs) as a reminder to workers to maintain social distancing at workstations and while on breaks.

❑ Encourage single-file movement with a 6-foot distance between each worker through the facility, where possible.

❑ Use physical barriers, such as strip curtains, plexiglass or similar materials, or other impermeable dividers or partitions to separate manufacturing workers from each other, if feasible.

❑ Add additional clock in/out stations, that are spaced apart, to reduce crowding in these areas. Consider alternatives such as touch-free methods or staggering times for workers to clock in/out.

❑ Stagger workers' arrival and departure times to avoid congregations of workers in parking areas, locker rooms, and near time clocks.

❑ Provide separate entry and exit points when possible to avoid crowding of employees during shift change and at other times.

❑ Remove or rearrange chairs and tables, or add partitions to tables, in break rooms, and other areas workers may frequent to increase worker separation. Identify alternative areas to accommodate overflow volumes such as training and conference rooms or use outside tents for break and lunch areas.

❑ Stagger break times or provide temporary break areas and restrooms to avoid grouping of workers during breaks (to maintain at least 6 feet of distance from others at all times).

❑ Limit facility access only to essential workers.

❑ If meetings must be held, such as at shift changes, break them into smaller groups instead of holding a larger meeting. Eliminate non-essential meetings.

❑ Designate workers to monitor and facilitate distancing on production or assembly line floors.

❑ Encourage workers to avoid carpooling to and from work, if possible. If carpooling or using company shuttle vehicles is a necessity for workers, the following control practices should be used:
  o Limit the number of people per vehicle as much as possible.
  o Encourage employees to maintain social distancing as much as possible.
  o Encourage employees to use hand hygiene before entering the vehicle and when arriving at the destination.
  o Keep windows open to increase air circulation, if weather is permitting
  o Require employees in a shared van or car space to wear cloth face coverings.
  o Clean and disinfect commonly touched surfaces after each carpool or shuttle trip (e.g., door handles, handrails, seatbelt buckles).
  o Encourage employees to follow coughing and sneezing etiquette when in the vehicle.

❑ Consider adding manufacturing shifts to maintain overall manufacturing capacity while measures to minimize exposure to COVID-19 are in place.

❑ Consider grouping together workers. This can increase the effectiveness of altering the plant's normal shift schedules by making sure that groups of workers are always assigned to the same shifts with the same coworkers.

❑ Cohort or compartmentalize staff as much as possible for breaks, meetings, and similar activities to reduce the number of people who may be a close contact of a positive employee.

How to Align Manufacturing Workstations, If Feasible

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

Less than 6 feet

Less than 6 feet

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

6 feet

No worker   No worker

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

Partitions may need to be adjusted to integrate with the processing line or other manufacturing equipment.

No worker   No worker

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

Partition

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.

Partition

Source: CDC's Guidance for Manufacturing Workers and Employers

Cloth Face Coverings

There is growing evidence that wearing a face covering can help reduce the spread of COVID-19, especially because people may be infected with the virus and not know it. CDC recommends wearing cloth face coverings as a protective measure in addition to social distancing. Cloth face coverings may be especially important when social distancing is not possible or feasible based on working conditions.

Cloth face coverings are not PPE. They are not appropriate substitutes for PPE such as respirators (like N95 respirators) or medical facemasks (like surgical masks) in workplaces where respirators or facemasks are recommended or required to protect the wearer.

It is required that manufacturing facilities:
Ensure employees wear cloth face covering when they are or may be within six (6) feet of another person, pursuant to Executive Order 147 issued June 24th, 2020.

Manufacturing facilities should also ensure that cloth face coverings:
- ❑ Fit over the nose and mouth and fit snugly but comfortably against the side of the face;
- ❑ Are secured with ties or ear loops;
- ❑ Include multiple layers of fabric;
- ❑ Allow for breathing without restriction;
- ❑ Can be laundered using the warmest appropriate water setting and machine dried daily after the shift, without damage or change to shape (a clean cloth face covering should be used each day)
- ❑ Are not used if they become wet or contaminated;
- ❑ Are replaced with clean replacements, provided by the employer, as needed.
- ❑ Are handled as little as possible to prevent transferring infectious materials to or from the cloth; and
- ❑ Are not worn with or instead of respiratory protection when respirators are needed.

It is recommended that manufacturing facilities:
- ❑ Provide cloth face coverings to all employees.

Cleaning and Hygiene
Washing hands with soap for 20 seconds or using hand sanitizer reduces the spread of transmission.

It is recommended that manufacturing facilities:
- ❑ Provide workers access to soap, clean running water, and single-use paper towels for handwashing and increase the number of sanitizing stations containing at least 60% alcohol if soap and water are not immediately available. If possible, choose hand sanitizer stations that are touch-free.
- ❑ Develop protocols and provide supplies to increase the frequency of sanitization in work and common spaces.
- ❑ Increase placement and use of handwashing stations or hand sanitizers with at least 60% alcohol in multiple locations to encourage hand hygiene. If possible, choose hand sanitizer stations that are touch-free.
- ❑ Ensure that all tools and workstations are regularly cleaned and disinfected, including at least as often as workers change workstations or move to a new set of tools or workstation.
- ❑ Disinfect frequently touched surfaces in workspaces and break rooms (e.g., microwave and refrigerator handles, vending machine touchpads, knobs, levels, and sink handles) at least once per shift with an EPA approved disinfectant for SARS-CoV-2 (the virus that causes COVID-19).
- ❑ Frequently clean push bars and handles on any doors that do not open automatically and handrails on stairs or along walkways. If physical barriers are being used, then these should be cleaned frequently.

❑ Ensure that cleaning staff are supplied with additional PPE as they require and other controls to protect them from chemical hazards posed by disinfectants. Note: Employers must ensure their written hazard communication program (per 29 CFR 1910.1200) is up to date and training is up to date for all employees.

❑ Consider adding one shift to be reserved for cleaning and disinfection. Alternatively, workers could clean and disinfect their shared workstations at the beginning and end of their shifts.

❑ Consider other work place programs to promote personal hygiene, such as:
   o Building additional short breaks into staff schedules to increase how often staff can wash their hands.
   o Providing tissues and no-touch trash receptacles for workers to use.

❑ Educate workers to avoid touching their faces, including their eyes, noses, and mouths.

Personal Protective Equipment

Personal protective equipment (PPE) refers to any protective clothing, helmets, gloves, face shields, respiratory equipment designed to be worn by workers to shield them from hazards in the workplace. Employers must conduct a hazard assessment to determine if hazards for which workers need PPE are present, or are likely to be present; and ensure that appropriate PPE is supplied to workers. The results of that assessment will be the basis of workplace controls (including PPE) needed to protect workers. Cloth face coverings are not considered PPE. They are not appropriate substitutes for PPE such as respirators (like N95 respirators) or medical facemasks (like surgical masks) in workplaces where respirators or facemasks are recommended or required to protect the wearer. There is growing evidence though that wearing a face covering can help reduce the spread of COVID-19. They may be worn as source control in preventing the spread of COVID-19.

It is recommended that manufacturing facilities:
❑ Use videos or in-person visual demonstrations of proper PPE donning (putting on) and doffing (removal) procedures. (Maintain social distancing during these demonstrations.)
❑ Emphasize that care must be taken when putting on and taking off PPE to ensure that the worker or the item 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.
❑ Ensure PPE worn at the facility is not taken home or shared.
❑ Encourage hand washing before and after handling all PPE.

Face shields may serve as additional PPE:
❑ Face shields are not a replacement for masks and face coverings for preventing respiratory droplets from being released from a person (source control).
❑ If helmets are being used, use face shields designed to attach to helmets.
❑ Face shields can provide additional protection from both potential process-related splashes and potential person-to-person droplet spread in combination with other face protection.
❑ Face shields can help minimize contamination of masks and cloth face coverings.
❑ After use, face shields should be cleaned and decontaminated 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.

As part of their hazard assessments, employers must always consider whether PPE is necessary to protect workers. Specifically, when engineering and administrative controls are difficult to maintain and there may be exposure to other workplace hazards, such disinfectants used for facility cleaning, PPE should be considered.

During the COVID-19 pandemic, manufacturing employers should consider allowing voluntary use of filtering facepiece respirators (such as an N95, if available) for their workers, even if respirators are not normally required. Employers who permit voluntary use of respirators must comply with applicable provisions of OSHA's Respiratory Protection standard (29 CFR 1910.134), including providing a copy of Appendix D – Information for Employees Using Respirators When Not Required Under Standard to employees who use such equipment.

When PPE is needed, employers should consider additional hazards created by poorly fitting PPE (e.g., mask ties that dangle or catch, PPE that is loose and requires frequent adjustment or tends to fall off), including hazards resulting from use of such PPE in a particular work environment (e.g., where workers are around machinery in which PPE could get caught).

Monitoring for Symptoms

Conducting regular screening for symptoms can help reduce exposure to COVID-19. Workers should be encouraged to self-monitor for symptoms such as fever, cough, or shortness of breath and be aware that a person can become infectious before they become ill, or without becoming ill. If they develop symptoms, workers should stay home. More information on how to monitor for symptoms is available from the CDC.

It is recommended that manufacturing facilities:
- ❑ Screen workers for COVID-19 symptoms and consider temperature checks). Options to screen workers for COVID-19 symptoms include:
    - o Conduct daily symptom screening (use this standard interview questionnaire English|Spanish) of employees at entrance to workplace.
    - o Provide verbal screening in appropriate language(s) to determine whether workers have had symptoms including a cough, shortness of breath or difficulty breathing, fever, chills, repeated shaking with chills, muscle pain, headache, sore throat, and new loss of taste or smell in the past 24 hours.
    - o Check temperatures of workers at the start of each shift to identify anyone with a fever of 100.4°F or greater (or reported feelings of feverishness). Ensure that screeners are trained to use temperature monitors and monitors are accurate under conditions of use (such as cold temperatures) and wear appropriate PPE.
- ❑ Do not let employees enter the workplace if they have a fever of 100.4°F or greater (or reported feelings of feverishness), or if screening results indicate that the worker is suspected of having COVID-19 or worker had close contact with someone diagnosed with COVID-19.
    - o Encourage workers to self-isolate and contact a healthcare provider; Provide information on the facility's return-to-work policies and procedures; and
    - o Inform human resources, employer health unit (if in place), and supervisor (so the worker can be moved off schedule during illness and a replacement can be assigned, if needed).

❑ Ensure that personnel performing screening activities, including temperature checks, are appropriately protected from exposure to potentially infectious workers entering the facility.

❑ Implement engineering controls, such as physical barriers or dividers or rope and stanchion systems, to maintain at least 6 feet of distance between screeners and workers being screened.

❑ If screeners need to be within 6 feet of workers, provide them with appropriate PPE based on the repeated close contact the screeners have with other workers.
  o Such PPE may include gloves, a gown, a face shield, and, at a minimum, a face mask.
  o N95 filtering facepiece respirators (or more protective) may be appropriate for workers performing screening duties and necessary for workers managing a sick employee in the work environment (see below) if that employee has signs or symptoms of COVID-19. If respirators are needed, they must be used in the context of a comprehensive respiratory protection program that includes medical exams, fit testing, and training in accordance with OSHA's Respiratory Protection standard (29 CFR 1910.134).

❑ Immediately separate from others at the workplace and send home workers who appear to have symptoms upon arrival at work or who become sick during the day. Require symptomatic employees to wear face coverings until they have left the worksite.

❑ Cleaning and disinfecting procedures should be implemented by designated personnel following CDC guidelines once sick employee leaves.

❑ Ensure that personnel managing sick employees are appropriately protected from exposure. When personnel need to be within 6 feet of a sick colleague, appropriate PPE does include gloves, a gown, a face shield and, at a minimum, a face mask. N95 filtering facepiece respirators (or more protective) may be appropriate for workers managing a sick employee if that employee has signs or symptoms of COVID-19. If respirators are needed, they must be used in the context of a comprehensive respiratory protection program that includes medical exams, fit testing, and training in accordance with OSHA's Respiratory Protection standard (29 CFR 1910.134).

❑ If a worker is confirmed to have COVID-19 (regardless of whether they have had symptoms of COVID-19), inform anyone they have come into contact with (including fellow workers, inspectors, graders, etc.) of their possible exposure to COVID-19 in the workplace, but maintain confidentiality as required by the Americans with Disabilities Act (ADA). The employer should instruct fellow workers about how to proceed based on the CDC Public Health Recommendations for Community-Related Exposure.

❑ If a worker becomes or reports being sick, or testing positive for COVID-19, disinfect the workstation used and any tools handled by the worker.

❑ Work with state and local health officials to facilitate the identification of other exposed and potentially exposed individuals, such as coworkers in a plant.

❑ Review leave and incentive policies:
  o Analyze sick leave policies and consider modifying them to make sure that ill workers, including asymptomatic workers infected with SARS-CoV-2, are not in the workplace. Make sure that employees are aware of and understand these policies.
  o Analyze sick leave polices and consider modifying them to allow for paid sick leave for any worker who is isolated due to symptoms or a diagnosis of COVID-19 or in quarantine due to close contact with someone who was diagnosed with COVID-19
  o 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.
  o Additional flexibilities might include giving advances on future sick leave and allowing employees to donate sick leave to each other.

❑ Establish a system for employees to alert their supervisors if they are experiencing signs or symptoms of COVID-19 or if they have had recent close contact with a suspected or confirmed COVID-19 case.

❑ On-site healthcare personnel, such as facility nurses or emergency medical technicians, should follow appropriate CDC and OSHA guidance for healthcare and emergency response personnel.

Addressing Return to Work

Critical infrastructure employers have an obligation to manage the continuation of work and return to work of their workers in ways that best protect the health of workers, their coworkers, and the general public.

It is recommended that manufacturing facilities:

❑ Consider providing screening and ongoing medical monitoring of these workers, ensuring they wear an appropriate source control device (e.g cloth face covering) in accordance with CDC and OSHA guidance and any state or local requirements, and implementing social distancing to minimize the chances of workers exposing one another.

❑ Continue to minimize the number of workers present at work sites, balancing the need to protect workers with support for continuing critical operations.

❑ Follow the CDC Critical Infrastructure Guidance for reintegration (bringing back) of exposed, asymptomatic workers to on-site operations. The guidance advises that employers should allow workers to quarantine after an exposure to someone who is diagnosed with COVID-19. However, if the worker is necessary to ensure continuity of operations of essential functions, 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. Consultation with an occupational health provider and state and local health officials will help employers develop the most appropriate plan.

❑ Follow the CDC interim guidance, "Discontinuation of Isolation for Persons with COVID-19 Not in Healthcare Settings" for reintegration of workers who have had COVID-19 (COVID-19 positive), including those workers who have remained asymptomatic, to on-site operations. As noted above, consultation with an occupational health provider and state and local health officials will help employers develop the most appropriate plan.

❑ Per CDC guidelines, if an employee has been diagnosed with COVID-19 or is presumed positive by a medical professional due to symptoms, the employee should be excluded from work until
   o No fever for at least 24 hours since recovery (without the use of fever-reducing medicine) AND
   o Other symptoms have improved (e.g., coughing, shortness of breath) AND
   o At least 10 days have passed since first symptoms

❑ Per CDC guidelines, if an employee has been diagnosed with COVID-19 but does not have symptoms, they should remain out of work until 10 days have passed since the date of their first positive COVID-19 diagnostic test results, assuming they have not subsequently developed symptoms since their positive test.

❑ A test-base strategy is no longer recommended to discontinue isolation or precautions and employers should not require documentation of a negative test before allowing a worker to return.

❑ Implement strategies to prioritize positions without which critical work would stop. This prioritization should include an analysis of work tasks, workforce availability at specific work

sites, and assessment of hazards associated with the tasks and work site. Employers may be able to cross-train workers to perform critical duties at a work site to minimize the total number of workers needed to continue operations.

Communication and Combatting Misinformation

Help ensure that the information workers are getting is coming directly from reliable resources. Use resources from a trusted source like the CDC or NCDHHS to promote behaviors that prevent the spread of COVID-19.

It is recommended that manufacturing facilities:
- ❑ Educate and train workers and supervisors about how they can reduce the spread of COVID-19.
- ❑ Supplement workers' normal and required job training with additional training and information about COVID-19, including recognizing signs and symptoms of infection and ways to prevent exposure to the virus. Training should include information about how to implement the various infection prevention and control measures recommended here and included in any infection prevention and control or COVID-19 response plan that an employer develops.
- ❑ Ensure all communication and training is easy to understand and (1) is provided in languages appropriate to the preferred languages spoken or read by the workers, if possible; (2) is at the appropriate literacy level; and (3) includes accurate and timely information about:
    - o Signs and symptoms of COVID-19, risks for workplace exposures, the spread of the virus, and how workers can protect themselves;
    - o Proper handwashing practices and use of hand sanitizer stations;
    - o Cough and sneeze etiquette; and
    - o Other routine infection control precautions (e.g., signs and symptoms of COVID-19, putting on or taking off masks or cloth face coverings and social distancing measures).
- ❑ Put up signs, posters, and flyers at main entrances and in key areas throughout the facility such as those found on the Social Media Toolkit for COVID-19 to remind workers to use face coverings, wash hands, and stay six feet apart whenever possible (Wear, Wait, Wash).
    - o Know Your W's signs are available in English and Spanish.
- ❑ Ensure posted signs:
    - o Can be read from a far distance that inform visitors and workers of social distancing practices.
    - o Are simple posters in all of the languages that are common in the worker population that encourage staying home when sick (or after testing positive for the virus that causes COVID-19), cough and sneeze etiquette, and proper hand hygiene practices.
    - o Are placed at the entrance to the workplace and in break areas, locker rooms, and other workplace areas where they are likely to be seen.
- ❑ Provide alternative training for workers who cannot read written materials or who require other reasonable accommodations.
- ❑ Provide workers with information on how to access resources for mental health and wellness (e.g., 211 and Hope4NC Helpline 1-855-587-3463).

Water and Ventilation Systems

It is recommended that manufacturing facilities:
- ❑ Consider consulting with a heating, ventilation, and air conditioning engineer to ensure adequate ventilation in work areas to help minimize workers' potential exposures.

❑ If fans, such as pedestal fans or hard-mounted fans, are used in the facility, take steps to minimize air from fans blowing from one worker directly at another worker. Personal cooling fans should be removed from the workplace to reduce the potential spread of any airborne or aerosolized viruses.

Reduced use of water and ventilation systems can pose their own health hazards. There is an increased risk for Legionella and other bacteria that come from stagnant or standing water. If a manufacturing facility is re-opening after closure or has been functioning at reduced capacity, management should follow the CDC's Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation to minimize the risk of diseases associated with water.

Additional Resources
- NCDHHS: North Carolina COVID-19
- CDC: Guidance for Manufacturing Workers and Employers
- CDC: Manufacturing Facility Assessment Toolkit
- CDC: Interim Guidance for Businesses and Employers
- CDC: Cleaning and Disinfecting Your Facility
- EPA: Disinfectants for Use Against SARS-CoV-2
- OSHA: COVID-19 Guidance for the Manufacturing Industry Workforce
- HHS/OSHA: Guidance on Preparing Workplaces for COVID-19
- DHS: Guidance on the Essential Critical Infrastructure Workforce
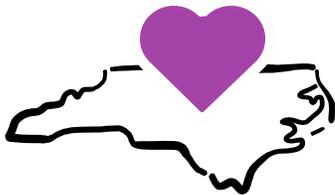
#StayStrongNC

**Staying apart brings us together.
Protect your family and neighbors.**

Learn more at nc.gov/covid19.

NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**