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Reopening: Guidance for Transit Systems (Buses, Subways, and Light Rails)

Guidance Document

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Overview

This document is intended to provide guidance for the continuing operation of transit systems, specifically buses, subway systems, and light rails. Various modes of transit have continued operation throughout the pandemic, albeit in a limited capacity, due to the public's need for transportation. To get closer to normal operations, and to limit the spread of COVID-19, transit agencies are encouraged to continue implementing controls, including physical distancing, face coverings, and increased disinfection. This guidance applies to the vehicles in transit systems (buses, subways, and light rails), as well as the transit system stations and stops. This guidance is relevant to transit employees, including operators of the vehicles, as well as the employees who work at the stations, maintenance and cleaning staff, in addition to passengers.

As many individuals prepare to return to work or school, or generally increase their use of public transportation to get to their destinations, the employers and managers of transit systems will likely have many questions that include, but are not limited to:

- How can transit agencies protect the health and safety of their transit employees and passengers from COVID-19 during passenger transport?
- What do we do if a transit employee tests positive for or is suspected to have developed COVID-19?
- What do we do when transit vehicles are returned to their hubs at the end of a shift?
- How do we assure all stakeholders that we are doing all we can to prevent the spread of disease?

The purpose of this guidance is to provide clear and actionable steps towards the safe operations of public transportation systems through prevention, early detection, and control of COVID-19. It is important that transit agencies consistently monitor and evaluate the effectiveness of the implemented mitigation strategies and alter their approach as needed.

The following document addresses aspects of transit systems (buses, light rails, and subway systems) which have not been previously evaluated in other AIHA Guidance documents. Please refer to the Resources section below for links to AIHA Guidance documents concerning [ride sharing](#), and others that may be associated with public transportation including: [offices](#), and [construction work](#).

What actions should Transit Agencies, Employers, or Managers take to protect employees and passengers during passenger transport?

Transit agencies, through the operation of bus lines, subway systems, and light rail systems, should continually monitor international (World Health Organization (WHO)), federal (CDC), state, and local guidelines for updates and changes in recommendations, cleaning and disinfecting strategies, and other best management practices. At a minimum, follow the CDC [Mass Transit Decision Tool](#) for questions to consider regarding the reopening of mass transit during COVID-19. Employers or managers should seek guidance from regional, national, and international leaders regarding health policies and best practices. They should consider forming a team of professionals to monitor, assess, and implement new strategies as they become available. In addition, employers or managers in transit agencies should consider the following strategies for reducing the risk of COVID-19 transmission in regards to physical distancing strategies, enhanced cleaning practices, training, and risk communication.

Due to the variety of transit agencies (e.g., geographic location, size, physical layout, and structure), it may not be possible to implement all of the following recommendations; however, transit agencies are encouraged to work with state and local health officials on whether and how to implement these considerations, and make the necessary adjustments to



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meet the specific needs of the public transportation line, and the local community.

Physical Distancing Strategies/Vehicle Configuration

- Mark 6-foot increments on the ground outdoors/indoors at the stops for each transit system so passengers can maintain appropriate distancing before boarding.
- Mark 6-foot increments inside the transit vehicles so passengers and the operators can maintain appropriate distancing while onboard the vehicles.
 - Consider blocking off alternating rows of seating to encourage distancing between passengers.
 - Members of the same household can be seated together.
- Mark a 6-foot radius around the operator to limit contact between the operator and passengers.
 - Use a physical divider between the operator and passengers or signs/tape to educate passengers on physical distancing.
- To the extent possible, the number of passengers on board the public transportation line should be limited so that distancing and crowding can be controlled.
 - Provide more buses, train cars, etc. on lines with high ridership or during peak travel times to allow appropriate distancing.
 - Provide more frequent or longer trains to allow for appropriate distancing.
- Enforce, when possible, entering and exiting protocols, such as:
 - If only two doors are available for the vehicle, make announcements for those outside of the vehicles to wait until passengers exit, and then allow passengers to board.
 - Utilize a “one way” approach so that some vehi-

cle doors are used for entering only and others are used for exiting only. Include markings on the floor of the vehicles and platforms and communicate this traffic pattern to passengers.

- Consider reducing the number of entrances to stations to limit the number of areas to clean/disinfect. Make sure adequate signs are provided to direct passengers to other entrances and exits.
- Consider posting infographic sheets or signage as a visual reminder of the appropriate protocols for social distancing and face covering use. Also, share this information through social media, on transit websites and on transit apps.
- For work areas outside of vehicles (e.g., break rooms, office spaces, locker rooms, etc.):
 - Consider staggering break times for employees.
 - Consider staggering shift times (start and end) to limit the number of employees who need to access shared spaces (e.g., locker rooms, restrooms, and break areas).

Face Coverings

- Face coverings should be worn by all transit employees and passengers.
 - CDC recommends all people 2 years of age and older wear a cloth face covering in public settings and when around people who don't live in your household, especially when other social distancing measures are difficult to maintain.
- Consider providing operators with face coverings, as well as a face shield or goggles, if they do not create a hazard.

Cleaning/Disinfecting and Personal Hygiene Practices

- Ask employees to consider the following if they commute to work using public transportation:
 - Use other forms of transportation.
 - Change their commute time to less busy times.



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- Wash their hands as soon as possible after their trip
 - Provide appropriate supplies to support healthy personal hygiene practices (e.g., face masks, disposable gloves, and access to soap and clean water with drying materials, or alcohol-based hand sanitizers containing at least [60% alcohol](#) at their worksite).
 - Provide appropriate PPE to transit employees performing cleaning and disinfecting work. Follow the instructions provided by the product manufacturer for PPE requirements.
 - Increase cleaning and disinfecting services at stations, bus stops, and inside vehicles to as frequently as possible, at minimum this should occur at the beginning and end of each shift.
 - Clean and disinfect high-contact surfaces, including seats, hand rails, doors, and windows at least one time per day.
 - Increase cleaning and disinfecting services in common areas used by employees (e.g., break areas, locker rooms, restrooms).
 - Different [EPA registered chemicals](#) should not be mixed together. The combination could be **toxic by inhalation**.
 - Review product labels and Safety Data Sheets (SDSs) and follow manufacturer specifications for cleaning and surface contact duration.
 - Consider consulting an Industrial Hygiene expert if additional advice is needed. AIHA has a consulting list of qualified Industrial Hygienists.
 - Cleaning supplies should be provided and continuously stocked for use by employees.
 - Consider using a checklist or audit system to track when and how cleaning is conducted.
 - Do not use a wet rag approach (use disposable products instead).
 - Make hand sanitizer, or sanitation stations, available in stations and at major transit stops for passengers.
- ### Restrooms
- Doors to multi-stall restrooms should be able to be opened and closed without touching handles if 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.
 - If a key is used, it too should be disinfected after each use.
 - Place signs above toilet lids (if present) to indicate that they should be closed before flushing.
 - Encourage transit employees and passengers to wash their hands before and after using the restroom; place signage when appropriate.
 - Provide paper towels and air dryers in restrooms.
 - The WHO and CDC currently state that hands can be dried using a paper towel or hand dryer.
 - However, the use of touch or push hand dryers is discouraged due to possible surface contamination. If hand dryers are used, consider touchless devices.
 - Work with HVAC professionals to ensure that bathrooms are well ventilated.
 - Double efforts to keep bathrooms clean and properly disinfected. Maintain a record of sanitary work practices to ensure that this is performed routinely.
- ### Communication
- At a minimum, follow the CDC [Guidance for Businesses and Employers](#).



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- Develop a response plan for communicating to your employees the facts of SARS-CoV-2 virus and COVID-19 disease.
 - Institute a central person or group for responding to COVID-19 concerns and provide their contact information to employees.
- Ensure transit employees have face coverings and consider policies and communications that strongly encourage passengers to also wear face coverings.
 - Consider posting infographic sheets or signage as a visual reminder of the appropriate protocol.
- Provide up-to-date information to your employees about what is being done to mitigate the spread of COVID-19.
 - (e.g., disinfection routine, health policies for staff, physical distancing, and health and safety measures in place)

Training

- Transit employees should be trained on hand hygiene and coughing etiquette, and how to properly wear face coverings.
- Employees should receive, at a 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 precautionary measures.
- Health checks and reporting requirements of individuals infected with COVID-19 should be explained to employees.
 - Transit 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.**

- Remind employees that people may be able to spread COVID-19 even if they do not show symptoms.

Air Quality and Ventilation

- Make sure to communicate with the operators that the vehicle should be equipped with fresh air whenever possible (e.g., open windows).
- Optimize the ventilation system settings for vehicles and with stations, breakrooms and restrooms when fresh air is not possible. Ways to do this include, but are not limited to:
 - Maximize fresh air through your ventilation system.
 - Maintain relative humidity at 40-60%.
 - Consider using portable HEPA filtration units.
 - Consult an Industrial Hygiene expert to determine the optimal ventilation rate to reduce COVID-19 transmission. AIHA maintains a listing of [qualified industrial hygienists](#).
 - Also, consider consulting an HVAC professional and see [ASHRAE updates](#) for more information.

Screening and Temperature Check Tips for Employees

- At minimum, follow CDC guidelines and exposure protocol for Critical Infrastructure Workers.
- Follow CDC interim guidance for businesses and employers [responding to Coronavirus Disease 2019](#).
- Do not let anyone who is symptomatic go to work. Work with your health providers for support and guidance.
 - Monitor employees' wellness. If they are not feeling well, they should stay home/go home and call a supervisor. Revisit your leave or sick program to allow for time off.
- Persons who have a fever of 100°F (38°C) or above, or other signs of illness should not be admitted to the job site.



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Waste and Laundering

- Provide no-touch trash cans in stations and terminals for easy disposal of waste.
- Single-use items and used disinfection materials can be treated as regular waste, following regular safety guidelines.
- Any reusable cloth materials can be washed with detergent and dried on the highest temperature setting for the fabric.
- Ensure all commercial laundry services are aware of the potential for COVID-19 exposure before laundering.

What to Do in the Event of a COVID-19 Illness

- If a COVID-19 case amongst an operator is identified via testing or suspected based on symptoms (fever, cough, shortness of breath, gastrointestinal symptoms), or if a passenger known or suspected to have COVID-19 based on noticeable symptoms (fever, cough, shortness of breath), conduct an enhanced cleaning/disinfecting of the vehicle. At a minimum, use the guidance provided by [CDC](#) for Cleaning and Disinfection for Non-emergency Transport Vehicles.
- If a COVID-19 case amongst a transit employee is identified via testing or suspected based on symptoms (fever, cough, shortness of breath, gastrointestinal symptoms), conduct an enhanced cleaning/disinfecting of the employee's work area and any locations where the transit employee was known to be working. At a minimum, use the guidance provided by CDC for Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019.
- Cleaning and disinfecting should be done immediately by trained personnel who must wear appropriate PPE. Keep windows and doors open during

the cleaning and disinfecting work.

- Personnel should dispose of their gloves after use and wash their hands and face when complete.
- To ensure effectiveness, visibly dirty surfaces should be cleaned using a detergent or soap and water prior to applying a disinfectant.
- For disinfection, diluted household bleach solutions, alcohol solutions with at least 70 percent alcohol, and EPA-registered disinfectants on List-N should be effective. **Diluted bleach (sodium hypochlorite; five tablespoons per gallon of water/four teaspoons bleach per quart of water) can also be used for suitable surfaces according to the CDC, following the manufacturer's guidance for usage and ensuring adequate ventilation.**
- For a transit employee who tests positive:
 - The employee should be isolated at the worksite until they can go home and should remain home in isolation. They should contact their healthcare provider for additional guidance.
 - Do not permit the employee to return to work until directed by a healthcare provider. However, if no direction is given from a healthcare provider, the [employee should not return until](#):
 - At least 3 days (72 hours) have passed since recovery, defined as resolution of fever without the use of fever-reducing medications; and,
 - Improvement in respiratory symptoms (e.g., cough, shortness of breath); and,
 - At least 7 days have passed since symptoms first appeared.
 - Employees who are ill with non-COVID-19 related symptoms should be sent home for a minimum of 72 hours. Employees may return to work after they are symptom free for 72 hours without the aid of medication.



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What should an Employee do to protect themselves and the passengers?

- Educate yourself about the facts of COVID-19.
 - Obtain information about COVID-19 from credible sources such as the [CDC](#) or [WHO](#).
- Follow local and state health department guidelines and recommendations.
- Evaluate your health constantly. If you are sick stay home. If you have a temperature, stay home. If someone at home is sick or you came in contact with someone who became sick, stay home. If you have allergies or other medical illness, stay home.
NOTE: Employer HR Policies, HIPAA guidelines and other laws should be followed at all times.
 - Follow CDC guidelines for testing.
- Maintain good hygiene practices (washing hands with soap and water) or a hand sanitizer with at least 60% alcohol when you arrive at work, throughout the day after various activities (e.g., before and after preparing food, before and after administering medication, after handling garbage, before and after diapering, after using the bathroom or helping a child to do so, etc.), after touching your face covering, when you leave work, and when you arrive home.
- Understand the rules within the workspace – avoid large gatherings of greater than 10 employees, unless physical distancing of 6 feet or greater can be maintained.
 - Train operators and kiosk staff should maintain distance from passengers and other staff to the extent possible.
- Specific to buses:
 - The operator should follow all agency and local policies, but if a passenger needs to get off of the bus, consider stopping in a safe space away from the designated stop to allow for safe exiting of the bus.
 - If possible, skip stops if the bus is too crowded.
 - Keep doors closest to the operator closed when at stops to limit the passengers passing by the operator.
 - If only two doors are available for the vehicle, make announcements for those outside of the vehicles to wait until passengers exit, and then allow passengers to board through the back door.
 - If more than two doors are available, utilize a “one way” approach so that some vehicle doors are used for entering only and others are used for exiting only. Include markings on the floor of the vehicles and platforms and communicate this traffic pattern to passengers.
 - If the front door is the only door with accessible ramps for persons with disabilities, then the door must be used to allow easy access for the individual.
 - To limit contact with passengers, keep the door closed until the front seats have been affixed in a position to allow wheelchair access.
- CDC recommends all people 2 years of age and older wear a cloth face covering in public settings and when around people who don't live in your household, especially when other social distancing measures are difficult to maintain.
 - If you are an operator, maintain your face covering throughout passenger transport.
- Let your employer know if you have concerns about the face coverings that may be provided to you and that you are properly instructed on how to use them.
- Avoid touching surfaces on the vehicles that are often touched by passengers.
 - If unavoidable, wear disposable gloves, dispose



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- of these gloves after use, and wash your hands and face when complete.
- On breaks, limit touching surfaces outside of the operator area and vehicle.
 - If unavoidable, carry hand sanitizer (at least 60% alcohol) or sanitizing wipes to use before and after touching other surfaces.
- At a minimum, clean and disinfect the operator area and frequently touched surfaces before and after your shift.
- Each vehicle should be wiped down before and after each shift. This includes the hand rail, windows, window handles, walls, and seats. See CDC guidance for [bus transit operators](#) and [rail transit operators](#).
- Clean and disinfect the areas in the stations and at stops that are frequently touched. See CDC guidance for [transit maintenance workers](#) and [transit station workers](#).
- Use good cough and sneeze etiquette. Carry a disposable tissue; if you get the urge to sneeze or cough, cover your nose, mouth and face covering. Tissues should be immediately thrown away. Wash your hands and face thoroughly before going back to work.
- Make sure vehicle is equipped with fresh air whenever possible, and optimize the ventilation system settings when fresh air is not possible. Ways to do this include, but are not limited to:
 - Consider leaving the windows down during transport.
 - Maximize fresh air through your ventilation system, if applicable.
- Prepare for your trip by checking public transit operating times. Monitor the transit website or transit apps for currently guidelines.
- Passengers on board the public transit lines should follow the same practices of social distancing.
 - Stay at least 6 feet apart from others on board the vehicle, whether seated or standing.
 - If possible, travel during non-peak hours.
- Use a face covering during the trip – some states and cities currently require the use of a face covering when waiting for and when riding transit (e.g., San Francisco, Los Angeles).
- Don't use handshake greetings or hugs that require close contact.
- Avoid accepting anything for free that you may be handed on public transit.
- Avoid using and sharing disposable transit maps found at stations and transit stops.
- Follow any posted signs and floor markings (specific to social distancing and face coverings) inside the vehicle and at transit stations.
- If possible, avoid touching high-contact surfaces at stations and transit stops, including but not limited to, pay stations and turnstiles. Wash your hands or use hand sanitizer if contact with these surfaces is necessary.
- If possible, avoid touching of high-contact surfaces in the vehicles, including but not limited to doors and windows. Wash your hands or use hand sanitizer if contact with these surfaces is necessary.
 - If touching handrails or hand straps is necessary, use a disposable tissue or towel as a barrier to grip the surface. Keep these items away from your face after use. Immediately dispose of the tissue or place the towel in a sealed bag and wash after use. Wash the towel or hand strap (if machine washable) and discard the tissue, if used. Wash your hands or use hand sanitizer after contact with the tissue or towel.

What should **Passengers** do to protect themselves?

- Follow state and local guidelines regarding requirements for passengers on public transportation.



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- Consider carrying hand sanitizer (at least 60% alcohol) or sanitizing wipes.
- Use good cough and sneeze etiquette while in the vehicle. Carry a disposable tissue; if you get the urge to sneeze or cough, cover your nose, mouth and face covering. Tissues should be immediately thrown away. Immediately wash your hands or use hand sanitizer.
- Ask the operator to open available windows (do not recirculate the air in the vehicle).
- Once off public transportation, avoid touching your face, and follow proper good hygiene practices by washing your hands with soap and water.
- If you are symptomatic or feel unwell, avoid using public transportation, if possible.
- ASHRAE has guidance for [Transportation](#).
- OSHA [Hazard Communication](#).
- WHO Scientific Brief [Transmission of SARS-CoV-2: implications for infection prevention precautions](#).
- SFMTA [COVID-19 Muni Core Service Plan](#).
- SFMTA [COVID-19 Developments & Response](#).
- NYC MTA [Service During the Coronavirus Pandemic](#).
- NYC MTA [How We're Stepping Up Our Cleaning Procedures During the Coronavirus Pandemic](#).
- NYC MTA [Traveling Safely on Subways, Buses, and Trains](#).
- Atlanta [MARTA COVID-19 Update](#).
- Central Ohio Transit Authority [Responding to Coronavirus](#).

Resources

- CDC [Critical Infrastructure Interim Guidance](#).
- CDC Policy and Strategy on [Public Transportation](#).
- CDC Guidance on [Public transit, rideshares and taxis, micro-mobility devices, and personal vehicles](#).
- CDC [Interim Guidance for Mass Transit Administrators](#).
- CDC [Mass Transit Decision Tool](#).
- CDC Guidance for [Bus Transit Operators](#).
- CDC Guidance for [Rail Transit Operators](#).
- CDC Guidance for [Transit Maintenance Workers](#).
- CDC Guidance for [Transit Station Workers](#).
- CDC Interim Guidance for [Businesses and Employers](#).
- The EPA has developed a [list of disinfectants](#) for use against SARS-CoV-2.
- Chicago Transit Authority [COVID-19 info](#).
- LA Metro [UPDATING: Metro COVID-19 news and service information](#).
- Port Authority [Coronavirus \(COVID-19\)](#).
- U.S Department of Transportation Federal Transit Administration [SA 20-1 Safety Advisory](#).
- CDC Cleaning and Disinfection for Non-emergency Transport Vehicles: [Interim Recommendations for U.S. Non-emergency Transport Vehicles that May Have Transported Passengers with Suspected/Confirmed Coronavirus Disease 2019 \(COVID-19\)](#).
- CDC [Cleaning and Disinfecting Your Facility](#) Everyday Steps, Steps When Someone is Sick, and Considerations for Employers.
- CDC General Business [Frequently Asked Questions](#) website.



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About Occupational Health and Safety Professionals

Occupational health and safety (OHS) professionals (also known as industrial hygienists) practice

the science of anticipating, recognizing, evaluating, and controlling workplace conditions that may cause workers' injury or illness. Through a continuous improvement cycle of planning, doing, checking and acting, OHS professionals make sure workplaces are healthy and safe.

Get additional resources at AIHA's [Coronavirus Outbreak Resource Center](#).

Find a qualified industrial hygiene and OEHS professionals near you in our [Consultants Listing](#).

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These guidance documents were primarily developed for those smaller business that don't have readily available occupational health and safety resources, and designed to help business owners, employers, employees and consumers implement science-backed procedures for limiting the spread of the coronavirus. They are subject to any local, state, or federal directives, laws, or orders about operating a business and should only be used if they do not conflict with any such orders.

These documents are subject to revision and shall be updated accordingly.

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