COVID-19
PUBLIC SAFETY MEASURES
FOR METRO SYSTEMS IN INDIA
About the document

“COVID-19: Safety recommendations for metro agencies” was developed by the WRI India Ross Center for Sustainable Cities in May 2020 to provide metro operators with practical recommendations to implement in order to safely open metro systems in India.

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INTRODUCTION

India’s metro system carries more than 8 million people across cities every day, forming an integral part of the country’s urban transport system. Thirteen cities in India have developed metro rail networks, and the government has been investing heavily to build out metro systems, with a total commitment of 50 cities boasting this mass transit mode. Given the magnitude, there is a need for potential interventions required to address safety in metro networks.

As COVID-19 hotspots mushroomed across Indian metros, public transportation services, including metros, were halted in order to slow the virus’s spread. As public transit caters to the masses, they pose a higher risk in the spread of the disease. Considering a high number of common touch points and reliance on air conditioning and closed ventilation, metro systems have the potential to be high risk environments for spreading disease.

Given the need to restart the economy, the lockdown restrictions are being relaxed across India, though the number of cases is still rising, and cities are the epicentres of the growth. Manufacturing and other industries are also opening up, creating a growing demand for safe transport as cities are moving towards business as usual. Public transport networks will now find themselves at the frontlines of the crisis and will be instrumental in bringing normalcy going forward. There are multiple challenges to this; while they will have to recover from the financial impact that the pandemic created, they will also have to ensure safety of passengers as they operate under these circumstances and rebuild commuter confidence.

Indian public transport operators will need to considerably alter services operations in order to win back commuter confidence, both in terms of safety and convenience. A resilient strategy will help stem the concern surrounding the use of public transport and a possible shift towards single occupancy private vehicles – mitigating further increase in already high levels of traffic congestion and emissions.

This document presents a comprehensive framework for effective responses to the COVID-19 pandemic, customized for Indian metro operators. It contains pragmatic suggestions on how to adopt health and safety measures as set out by health agencies and how to communicate these to the public effectively. By implementing a wide-ranging and inclusive plan, metro operators can better strategize for various scenarios and build resilience across the system.
SUMMARY

Key recommendations for public safety in metro systems

Many commuters rely on metro rail systems as their mode of commute, and they interact with many common surfaces in the system such as grab handles and seats as a part of their journey. Additionally, the metro network has multiple interaction points inside the station area (ticketing, security platform), and the current inability to predictably identify infected persons (due to asymptomatic carriers) makes the system highly susceptible to disease transmission. Additionally, coaches primarily depend on air-conditioning to provide ventilation, that poses an increased risk of contagion through recycled air. Below is a summary of recommendations made in the document that can be considered to mitigate risk while travelling on the metro.

Before operations of the day

- Metro agencies should use data from AFC system to understand peak hours and peak direction of travel and alter train frequency based on commuter demand. Origin destination trip patterns should also be analyzed to predict allowable boarding at different stations and consider running dedicated services for high origin-destination station pairs.

- A passenger circulation plan must be created to avoid crowding at escalators and stairs. Passenger waiting areas in stations in non-fare areas (ticketing counters, security and AFC gates) and fare areas (concourse and platform) should have delineated standing locations as per the social distancing norms.

- Communication material in the form of posters and digital signages must be in place to provide passengers information of new operating procedures.

- All staff involved with metro operations must undergo health check for COVID symptoms daily.

- Metro agencies must procure PPE kits, sanitizer and disinfectant based on practical estimates of each stations need.

- Sanitization plan should be developed for metro coaches and metro stations (high footfall stations).

- Drivers and other metro staff involved in operations, maintenance and management of metro coaches and stations must undergo training on maintaining safety standards.

During operations of the day

- Metro agencies should plan a strategy for limiting commuter occupancy in metro coaches and different stations areas (concourse and platform). Considering mid-line stations will have limited boarding capacities, there needs a control on the flow of passengers at different stages of entry depending upon the available capacity of the train, to avoid overcrowding in the station. There needs to be communication between stations to estimate this availability before the train reaches the next station and wait times should be...
communicated to commuters through apps along with signages, posters inside and outside stations to avoid any situation of crowding and confusion (inside and outside the stations)

- As underground stations and metro coaches have limited ventilation, intermittent use of AC to keep temperature between 24-27 degrees centigrade and ensuring relative humidity of 40-70 percent through regular infusion of fresh air should be explored.

- Use of metro cards and digital tickets enabled through digital payments should be the preferred transaction mode for fare payment. Cash (exact fare amount) may be accepted in some cases with due precaution in cash collection boxes.

- Passengers using masks and after having been cleared by thermal scanner checks (at security) should only be allowed to board.

- Metro and security staff should be equipped with PPEs during duty shifts. The staff should be rotated frequently to minimize risk exposure and allow for periodic health checks.

- Metro agencies should enable social distancing norms through signages and markers at all levels of the metro station. Metro staff should be trained for contingency plans to address crowding issues at these points.

- Sanitization and social distancing protocols should be implemented and monitored for feeder services.

- Metro coaches and stations should be disinfected periodically.

**Post operations of the day**

- Set up monitoring plan to recheck on safety measures are in place at terminals, metro stations and interchanges.

- Cleaning standards of staff uniforms upon completion of duty shifts to be implemented.

- All equipment (at ticketing office, security infrastructure and station infrastructure), public toilets and shops inside the premises should be sanitized daily.

- Regular inventory checks and restocking of PPE kits, sanitizers and disinfectants per station should be enabled.

- Regular checkup of metro staff for COVID symptoms before and after duty shifts.

- Communication protocols around hygiene and safe transit usage for metro staff and passengers should be enabled.
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Note: These guidelines are suggestive and may be modified as per recommendations of the national government, state governments, health departments, or the National Centre for Disease Control.

BACKGROUND

COVID-19 is a respiratory virus that spreads through droplets discharged from the mouth or nasal tract of an infected person during coughing, sneezing, and talking among other activities. Initial studies have found that the virus survives in aerosols for up to three hours, cardboard for 24 hours, and plastic and stainless-steel surfaces for two to three days.

The virus’s ability to spread quickly makes public transport systems, especially metro rail systems, high risk environments for contamination. Metro rail systems transport many passengers in coaches that are densely populated, with many common surfaces of touch - grab handles and seats. In addition, coaches depend on air-conditioning to provide ventilation.

Stations also pose a risk. Underground stations rely on air conditioning because of closed ventilation (a mix of 10% fresh air and 90% recirculated air). They also have a variety of common surfaces that commuters and staff are in contact with, and the current inability to identify asymptomatic carriers makes the system highly susceptible to the risk of enabling transmission of the disease.

As cities emerge from the lockdown, which was implemented as precautionary measure against COVID-19, the initial period (ranging to a few months of operation) will be critical for curbing the spread of the disease, while also making crucial public transport networks, such as metro services, available to the public. The post-lockdown and post-COVID scenario will see people from all facets of society commuting for work, and not just for healthcare and other essential services.

According to reports, many commuters are looking for alternatives to public transportation and shared mobility services, for fear of contracting COVID-19 while travelling. This scenario may...
lead to increased traffic congestions, longer travel times, and increased vehicular emissions as the lockdown ends⁵ if the shift is made to low occupancy private modes.

Public transport systems are likely to see a decline in ridership in favor of personal vehicles, given the risk considerations, unless agencies rebuild commuter confidence by:

- Developing a resilient post lockdown operations plan for safety of passengers and staff
- Adopting stringent health safety measures for passengers, crew, and maintenance staff
- Communications strategy on the adoption of safe travel practices

This document has been created as a guide on possible safety measures that can be adopted by metro agencies to respond effectively to limit the spread of the COVID-19 pandemic. It presents guidelines for the transition phase of metro operations from lockdown to normalcy, i.e. post the emergency response phase of the pandemic.

The document presents guidelines based on the best practices adopted by cities around the world and recommendations put forth by national and international health agencies. The Ministry of Health and Family Welfare of India prescribes measures such as keeping 1m (3.3 feet) distance between two people⁶ and wearing personal protective equipment (PPE), such as masks, to prevent the spread of the disease. International organizations such as the World Health Organization (WHO) and the US Centers for Disease Control, prescribe social distancing by maintaining a minimum distance of at least 6 feet from other people². This document adopts a combination of measures from different agencies and prioritizes standards issued by Indian agencies for better localized context adaptations.

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RECOMMENDATIONS

The key interventions for metro agencies are categorized into following categories:

- **Behavioral interventions**: To protect commuters and staff from exposure and ensure continued functioning of services.

- **Interventions for awareness building**: To communicate safe travel practices to passengers and train staff.

- **Operational interventions**: To transition to normal operations and provide connectivity to all commuters while maintaining a safe and hygienic environment.

- **Sanitization interventions**: To inculcate and undertake sanitization practices and mechanisms to curtail spread of disease.

1. Behavioral interventions

There are two risk situations for passengers while using a metro: multiple interaction points and maintaining social distancing at several checkpoints.

A commuter interacts with metro infrastructure at four main points:

- ticket purchase;
- security check (which includes frisking of body and bag);
- use of elevators, escalators, and staircases for accessing and waiting at the platform and concourse; and
- standing and sitting inside the coach.

In such closed spaces, given the virus’s transmission patterns, it is important that commuters maintain social distancing; this extends to metro staff and crew as well. The risk can be mitigated by reducing the number of interactions between the staff and passengers and by maintaining physical distance between fellow passengers.

![Figure 1: Spots marked at 1 metre for passengers to stand at different points - security checks, use of AFC gates and buying tickets (Image Source: WRI India)](image-url)
This can be achieved by:

- **Provide designated waiting locations**: Interactions where queuing takes place such as purchase of tickets, security checks, and waiting at platforms, should have designated waiting spots, 1 metre apart, marked with clear signs on the floor. This should also be extended to outside the station as people wait for access into station.

- **Define protocols for seating**:
  
  i. **Provide priority seating**: Seating for vulnerable people (aged, pregnant, and children) should be allocated and provided, if required.
  
  ii. **Mark seating at the waiting areas on platform**: Seats provided for waiting at platforms that can be occupied should be marked with stickers.
  
  iii. **Mark seating and standing spots inside the metro coaches**: Seats that can be occupied and not occupied while travelling should be marked using stickers/covers. Seats that can be used should be 1m away from each other. Spots where people can stand, based on physical distancing norms, should also be identified and marked with stickers.

- **Mandate use of personal protective equipment (PPE)**: Personal protective equipment, such as masks and gloves, should be mandatory within station premises and on board the train.

- **Use of cashless payment methods**: Passengers should be encouraged to use metro cards and online QR-based tickets for travel and avoid buying tokens.

- **Promote contactless travel**: Passengers should made aware of avoiding unnecessary handling of surfaces in the station and coach. This can be done through awareness building signages highlighting high contact surfaces.
2. Interventions for awareness building

A. Informing passengers:

Commuters can be educated about safe practices through in-metro announcement systems and passenger information systems (PIS) at metro stations on the following behavior changes:

- **Maintain distance in the station and train:** Passengers should keep 1 metre from fellow commuters at all places inside the metro station and the train. The 1-meter rule applies while queuing for security checks and boarding and alighting from the train as well. The announcements can also share how to use the floor markings to maintain this distancing.

- **Avoid interacting with surfaces:** Unnecessary touching of commonly used surfaces, such as handrails, wherever possible in the metro station.

- **Incentivize metro card use:** Promoting the use of metro cards and online metro charge recharges through incentives. This will reduce the need to purchase tickets and exchange cash for every trip.

- **Encourage metro apps:** Promote the use of metro apps for commuters will allow them to receive up-to-date information on train schedules and station capacity, which will help them stagger their travel times and avoid crowding at stations.

- **Prevent contact at AFC gate:** Avoid unnecessary touching of the AFC gate for card reading, by holding the card few centimeters above the reader.

- **Promote use of staircases:** Encourage commuters to use the staircase instead of elevators, which are enclosed spaces. This can avoid infections and crowding.

- **Broadcast government guidelines:** Display guidelines from the Ministry of Health and Family Welfare on the digital PIS system, metro apps, and through announcements at metro stations and within the train.
• **Visual Informational Posters**: Visual messages and posters on COVID-19 precautions (use of PPE, safe hand hygiene) should also be provided at multiple locations within the station and coach.

• **Display clear seating information**: Advising commuters to sit on designated seats or stand at the designated points in the metro.

**B. Staff training and communication**:

• **Train staff on PPE use**: The transit agency must provide training for all maintenance staff on the use and disposal of PPEs to avoid cross-contamination.

• **Establish safe cash and TOM/EFO handling procedures**: As station staff come in contact with cash, they must be trained on how to handle it and how to disinfect it, both prior to distribution and after collection.

• **Training on disinfecting practices**: Staff should be trained on disinfection practices of the station surfaces, coaches, and tokens.

• **Training on crowd control**: On-ground staff should be trained on enforcing social distancing at station area points where crowding can happen, without hampering commuter experience.

• **Present communication material on hygiene practices**: Agencies must display posters at workstations on how to maintain personal hygiene, use PPEs, and clean hands and other body surfaces that come in contact with potentially contaminated surfaces.

**3. Operational interventions**

Metro agencies can adopt the following measures to bring in operational changes that will help curtail transmission of infection amongst passengers and the metro staff:

**A. Issuing tickets**:

• **Use higher denominations for at-station recharging cards**: Passengers should be encouraged to use metro cards. For at-station recharges, higher denomination recharges should be encouraged to reduce instances and frequency of contact with the ticketing staff.8

• **Adopt digital payments**: Online payment methods (such as UPI, net banking and wallet platforms) should be encouraged for buying metro tickets and recharging metro cards. This will help avoid currency exchange and in person interactions.

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• **Money Collection boxes**: Fare collection boxes and a dedicated empty and clean surface adjoining the box should be placed at ticketing offices. Based on fare, the commuter drops the change in the box and the ticketing officer places the token/card and change on the clean surface for the commuter.
  
  o The officer must also be equipped with change in denominations of INR 5, INR 10, INR 20, INR 50, etc. The officer must not dip into the collection box to tender balance to the commuter.
  
  o In case of returning change, the officer places the money on the same surface along with the token for the commuter.
  
  o The cash collected in the box is to be sanitized thoroughly at the end of every day.

• **Sanitize tokens**: Tokens should be thoroughly sanitized before use, after collecting them from AFC gates.

• **Avoid ticket vending machines**: Issuing tickets through ticket vending machines should be suspended, owing to several touchpoints and recycled cash.

• **Clean ticketing windows and surfaces**: Surfaces close to ticketing windows and ticket vending machines should be frequently cleaned with disinfectant.

B. **Security Check**:  

![Image of security check](Image Source: WRI India)

• **Mandate the use of PPE**: All security crew must use PPE (face shields, masks, gloves and glasses) during security checks and sanitize their hands after their shift is over.

• **Avoid physical frisking**: Physical frisking of commuters should be discouraged, and handheld detectors with extension rods or walk-through detectors should be used (without the detector touching passengers).

• **Ensure proper precautions for female security checks**: Enclosed spaces for women’s security checks should have free air circulation. Neither the security nor the passenger should be touching any surface during this process.

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• **Institute temperature checks for passengers:** Metro agencies should ensure that all commuters entering a terminal have undergone a temperature check through Thermal Scanners (pointed directly at 1-3 cm away from passengers) to ensure that they are not actively displaying symptoms of COVID-19. Thermal scanners must be placed at all security checks and entry of commuters must be restricted accordingly.

• **Use of camera-based thermal scanning technology:** Metro agencies can explore using thermal scanning software in existing CCTV cameras to detect crowding at different levels of the station area.

**C. Operation planning and boarding-alighting practices:**

![Image](https://example.com/image.png)

Figure 5: Passenger waiting areas at concourse and platform at safe distances, elevator use for elderly and commuters with special needs and staggered boarding and alighting from the train (Image Source: WRI India)

• **Limit commuters in station and reduce metro coach occupancy by half:**

  o **Limit passenger occupancy:** Passenger occupancy should be limited to 50% capacity of the train, allowing social distancing practices to be properly maintained. Considering the limited carrying capacity, the allowable boarding capacity at intermediate station will vary. The following strategies can be adopted:

  i. **Planning for peak:** Metro agencies should use commuter travel data from AFC to understand peak hours and peak direction of travel and alter train frequency based on commuter demand.

  ii. **Dedicated services:** Origin-Destination patterns should be analyzed to understand high volume boarding and alighting station pairs. Dedicated trains should be considered between these station pairs where possible.

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iii. **Close high-risk stations:** Stations which lie inside containment zones should be non-operational and should be sealed for commuter access.

- **Limit the number of people:**
  - **Communication protocol across stations:** Metro agencies should plan for communication protocols between stations on the coach wise occupancy levels of trains leaving the station. This will enable metro staff at the next station to plan for commuter flow in coaches/trains and allow for smoother flow of commuters. Additional passengers can be kept standby for stations that experience higher alighting numbers (based on occupancy of train from previous station). This will in turn help controlling the inflow of passengers into the station.
  - **Mechanisms that allow for manned screening of passenger numbers should be implemented to limit commuters inside station area at different levels – entry of station, non-fare area (ticketing and security) and fare area (concourse and platform) at designated capacity.** Where possible CCTV-based people counting can be deployed and analyzed to ensure optimum number of commuters are waiting at different levels. This can be communicated to on-ground staff to manage congregation and maintain safe distances.

- **Managing people circulation:**
  - **Sharing information on wait times:** Information signages should be used at different levels and outside stations to indicate general wait times and procedures to follow when passing through the station.
  - **Designate alternate doors for boarding and alighting:** This measure will help reduce contact between passengers. The doors should be marked distinctly using differently colored floor stickers.
  - **Passenger egress protocols:** At interchange stations, metro staff should take measures to discourage people congregation and enable safe throughput practices such as coach-wise disbur-sal. E.g.: Passengers of different compartments wait for their turn to approach escalator/ elevator to exit the platform and concourse.
  - **Allow staggered boarding/alighting:** Increasing a train’s stoppage time (originally at 40 seconds at each station\(^\text{12}\)) and staggering commuter flow (through coach-wise boarding and alighting) at each metro station, will allow passengers to easily board and alight while maintaining 1m distances from fellow passengers. Based on station platform layouts, metro agencies can incorporate staggered exits of commuters from coaches.
  - **Indicate where passengers can stand:** Provide marking at the platforms to designate points that passengers can stand on. To maintain social distancing throughout the station, metro agencies can explore the enforcement through crowd management mechanisms. Similar techniques of waiting spots and commuter information can be implemented in the station area, to allow optimum number of commuters to access the station.

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- **Utilize staff for crowd control:** During peak hours and high commuter flow, metro stations can deploy staff to ensure even passenger movement and limit the number of people waiting at different levels – at the platform and at different parts of the concourse.

- **Use of station CCTV cameras**\(^\text{13}\): Station-level monitoring of social distancing and crowding inside stations through CCTV cameras should be encouraged. This can be communicated to on-ground staff to manage congregation and maintain safe distances.

![Figure 6: Metro coach layout – demarcating seats for use, floor markers for standing and gate usage (Image Source: WRI India)](image)

- **Reduce escalator use:** There is a risk of overcrowding at the base of escalators. Limit the number of commuters on station escalators to maintain social distancing. Alternatively, agencies can explore closing escalators and promoting the use of stairs to avoid crowding.

• **Provide facilities for elderly and handicapped:** Station elevators can be operated by metro staff and their use should be limited to elderly and differently abled commuters.

• **Sanitization of feeder services:** Metro agencies should communicate and ensure sanitization and social distancing protocols are followed by feeder services providers.
  
  o Shuttle and cab-based services should limit the number of passengers in vehicles, using signages and markers to demarcate seating, and using technology to book prepaid tickets and seats—reducing the need for physical cash-based transactions.

  o Metro agencies should prioritize cycling and cycle-based services from metro stations and cycle parking should be designated to increase their use.

D. **Enhance utilization of infrastructure at stations evenly:** High (and often unidirectional) commuter flow through stations requires strategic use of infrastructure to maximize commuter throughput, while maintaining social distancing practices. This throughput and efficiency can be enhanced if infrastructure, such as ticket counters, AFC gates and vertical transportation infrastructure (such as elevators and staircases) are utilized evenly across stations. By utilizing signs and manual interventions, commuters can be actively directed to areas to prevent certain places from being overused while others operate under capacity.

E. **Arrange medical consultations:** Provide on-board crews and other transit staff with priority access to in-person or video-based medical consultation, in case they present any COVID-19 symptoms.

### 4. Sanitization interventions

Routine cleaning and disinfection of station infrastructure and metro coaches can play an important role in minimizing the spread of diseases transmitted through contact with an infected person or surface. As such, metro agencies, in addition to any routine cleaning, should adopt the following measures:

A. **Metro car and stations cleaning:**

  • **Stagger air conditioning inside metro and at stations:** Metro agencies should explore reduced use of air conditioning services at stations during non-peak hours to reduce the spread of viruses through recycled air\(^{14}\). For stations and metro coaches that have limited ventilation, intermittent use of AC to keep temperature between 24-27 degrees centigrade and ensuring relative humidity of 40-70 percent through regular infusion of fresh air\(^{15}\) should be explored.


• **Sanitize AC vents daily and replace filters frequently**: Metro coaches are ventilated through air conditioning, which carries the risk of retaining infectious material. Cleaning of air filters after every metro trip (or a similar suitable frequency) should be prioritized16.

• **Clean the station area**: The entire station area must be sanitized with disinfectants. Security fixtures, equipment and x-ray tables should be sanitized every 30 minutes17.

• **Avoid compressed air/water**: Compressed air and/or water under pressure should not be used for cleaning, as it may re-aerosolize infectious material. Vacuum cleaners should be used only after disinfection has taken place.

• **Clean coaches after each trip**18: Coaches should be cleaned and sterilized after each trip. All surface areas in the metro cars should be cleaned. Handrails, grab handles, bars and seats should be wiped with a disinfectant after every trip. To increase the frequency of cleaning, transit agencies can organize rapid response cleaners stationed at terminal metro stations20 to reduce impact on headway.

• **Decide station cleaning frequency**: The frequency of cleaning metro station premises should be decided based on crowding at the station.

• **Clean high contact surfaces in the station**:
  
  o **Surfaces with human interaction**: All metro surfaces that are used or touched by passengers and crew, such as handrails, AFC gates, etc., should be wiped down with detergent and water, followed by a disinfectant. The frequency of cleaning can be once per hour during peak hours and once every four hours during non-peak hours.

  o **Focus areas**: Special attention should be paid to clean the following surfaces: seats and backrests, adjacent walls and windows, straps, handles, rails, and other fittings that are frequently used.

• **Use covers or seals**: In case high contact surfaces (e.g. elevator buttons) are difficult to clean or liable to retain infectious residue, they should be sealed and covered with plastic or any material that can be intermittently changed.

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• **Supervise and planning of cleaning activities:**
  
  o All cleaning activities should be supervised and inspected periodically to ensure that the correct procedures are being followed.

  o Records of all cleaning activities must be maintained and checked by drivers prior to starting the next trip.

  o There should be a list of cleaning surfaces, categorized based on priority, importance and frequency of need for sanitization. Cleaning strategies can be customized accordingly, and staff can be trained based on the categories.

B. **Precautions for station and maintenance staff**

There are no specific occupational health and safety (OSHA) standards covering COVID-19. However, some OSHA requirements may apply to prevent occupational exposure to COVID-19.

• **Provide PPE** for cleaning and handling trash:

  Safety of maintenance staff is crucial; they fall under the high-risk category due to their direct or indirect exposure to contaminated surfaces. The choice of disinfectant should be based on guidelines issued by health officials. Additionally, they may have to handle harsh, volatile, alcohol-based chemicals during the cleaning process. PPE for cleaning and maintenance crew includes:

  - Non-sterile disposable gloves
  - Masks
  - Protective eye gear
  - Gowns
  - Face shields

• **Provide adequate number of air filters and air filter sanitization kits:** With the use of air-conditioning in metros and station, staff should be provided with air filters that can be constantly changed and sanitized after use.

• **Remove and dispose used protective gear safely:** Disposable PPEs, such as gloves and masks, should be removed and disposed safely to avoid any contaminants that the staff has come in contact with.

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• **Practice hand hygiene**: Staff must wash hands with soap (Alcohol based gel) immediately after disinfection of any surface and disposal of PPE to reduce risk.

• **Social distance of station staff**: Staff must maintain a minimum distance of 1 metre between each other while working on vehicle maintenance or otherwise, to avoid potential cross-contamination.

• **Dispose of materials properly**: All soiled material and gloves used for cleaning should be disposed of in a leak-proof bag that cannot be reopened. The agency should follow city waste disposal guidelines for getting rid of the waste safely.

• **Provide hand wash infrastructure**: All stations should be equipped with wash basins and toilets that are cleaned after every shift. Units should also be provided with disposable towels.²⁴

• **Provide cleaning and sanitizer liquid dispensers**: All service stations should be provided with liquid hand wash and alcohol-based sanitizer dispensers.

• **Ensure health checks**: Transit agencies should conduct periodic health checks for all staff working during the pandemic response phase. Agencies should consider stationing thermal scanners at metro stations and have working staff take daily temperature checks.

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