The steady ongoing transmission of SARS-CoV-2 has ratcheted up attention to the multiple threats pandemic outbreaks present to a wide range of occupations and workers. The safety and health of workers in health care and emergency medical response will need to be a critical part of evolving infection control policies and practices since their ability to function will be crucial in halting and controlling the spread of an outbreak.

In addition, workers associated with the movements of infected individuals e.g., travel (airline and train and buses) and hospitality (hotels, restaurants) may also be at increased risk as will any workers in a facility or institution where positive cases develop. Many other collateral sectors will be significantly involved during an outbreak in maintaining critical infrastructure like food, transportation, communications, education, childcare, elderly care, and so on. There have been ongoing infectious preparedness plans designed to stop, slow, or limit the spread of a pandemic in the United States for decades. These plans address limiting domestic spread and mitigating disease but also sustaining infrastructure and reducing the adverse effects of the pandemic on the economy and society. These plans have been developed by many sectors in response to potential small, medium, and large scale outbreaks.

Infection control plans were created in response to the HIV epidemic in the 80s. After the Multi-Drug Resistant Tuberculosis crisis in the 90s, the Centers for Disease Control (CDC) launched a nationwide effort to revitalize national capacity to protect the public from infectious diseases. Infection control plans were created in response to the HIV epidemic and large scale outbreaks. These plans address limiting domestic spread and mitigating disease and large scale outbreaks.

Infection control policies are usually an ensemble of connected themes:
- locating and isolating cases and tracing contacts,
- monitoring and quarantining contacts,
- travel restrictions, screening travelers,
- maintaining strict infection control procedures within high risk settings,
- inventories of protective equipment,
- preparedness drills,
- pharmaceutical therapies that can immunize, or minimize impact of the infectious agent – (as yet none have been identified for COVID-19 though some are being rapidly explored),
- stockpiling and distribution of same when and if they prove to be effective and available,
- altering work schedules and locations,
- shutting down of facilities or limiting employee turnout,
- social distancing, limiting public gatherings.

Facility / Institutional Roles

Another important current within infection disease control is the specific infection disease control plan designed for specific issues related to that business, institution or networks of institutions. Some sectors like health care and public safety will require more resources since they will be directly treating and handling infected individuals, a crucial role in controlling an outbreak. But many other collateral sectors will play key social roles in controlling an outbreak like food shipping suppliers, transportation, communications, education, childcare, elderly care, and so on. They will need specific infectious disease control plans and support. All infection control policies should address worker safety and health.

Any infection control plan for any specific public or private institution will depend on the role they play – do they deliver babies or do they deliver packages. And, within the institution, target and focus will shift depending on the characteristics of an infectious agent – virulence, transmission mode (air, body fluids, surfaces), attack rates (in different age groups), vaccine protection (if any), susceptibility to antivirals, or other pharmaceutical treatments. Take as examples:

- Units in a hospital may be designated as special quarantine units. Workers within these units will need specialized training as regards to controlling transmission and protecting themselves.
- Or, emergency or public safety responders may be first on the scene to deal with infected patients or asked to transport patients. They should understand the appropriate quarantine and infection control policies and procedures appropriate to their risk and situation.
- Sectors that deal with the general public like public transit, airlines, food and grocery services, pharmacies will need plans that may emphasize social distance. strict crowd controls, reorganization of the work environment. (A good training model is the crowd management requirements of the RI state Fire Code.)
- Key resources: Many agencies and organizations can provide general and specific guidance: information, model control plans, training and up to date accurate and scientific based information to win the Kampf against COVID-19, it is essential to trace the course of the virus as it moves through populations. But it is equally essential to measure its course within a single patient. ~ Dr. Siddhartha Mukherjee

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This involves planning within the context of large-scale interventions usually by state actors in coordination with federal and local polities. Under our federalist structure each governor in each state is the final legal authority; in effect they are in charge for all disaster response in that state be it fires, floods, or infectious disease outbreaks. This is the third Coronavirus outbreak in two decades.

We as a society dropped the ball after SARS (in 2003). Just because the virus went away, we naively thought, well you know good-bye, Coronavirus… This is the third Coronavirus outbreak in two decades. – Dr. David Ho

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~ Dr. Siddhartha Mukherjee
The Climate Project: The Case for Public Transit

"I'm here to make the case for massively expanding public transport now, to fulfill the ambition of fossil-fuel-free city streets by 2030. If this transition is done properly is will mean good jobs, reduced inequality and healthier cities for all. The time to act is now, and the 20 million transport workers we represent are ready to play their part. If we act now and act together, dangerous climate change can be averted."

—Stephen Cotton, General Secretary International Transport Workers’ Federation (ITF)

Public Transit: A Solution to Climate Woes

One feature that unites these proposals is that they see dramatic reductions in transportation – related GHG coming about by expanding public transit and supporting other alternative modes of movement. Embracing those two issues would entail a broad set of strategies that address mobility as well as new strategies to address the current car-centered built environment.

A more limited approach is one that has become tethered to one strategic proposal: ‘decarbonize’ the transportation sector through transitioning to electric powered cars, buses, and trucks (EVs). There are some implications of this isolated strategy that should not be left out of discussion.

First, it neglects the GHG emissions where EVs are manufactured, and GHG emissions added during EV transport from the source of manufacture by water (super-tankers) and by land (trucks). Nor should we neglect the fact that as we transfer from a fossil fuel based source of transportation energies to an electric based source (a positive policy) the increased demand on the electric grid itself will reflect the modes and methods whereby the grid(s) obtains its energies; for the foreseeable future that will include, even as the proportion of renewable grows, many fossil fuel sources, coal, shale, and gas natural gas.

Also unaccounted for are GHG emissions embedded in the built environment imposed by our reliance on personal single passenger vehicles, even if electric. Thirty percent (30%) of real estate in many major cities are occupied by parking lots. There’s an estimated two billion public parking spots allocated for about 250 million cars nationwide—an unprecedented waste of public space that contributes to traffic and congestion, dangerous conditions for pedestrians and cyclists, and unsustainable costs for residential and commercial development. The design of our communities, traffic patterns, parking lot constructions, where developers locate, and so on all serve to perpetuate the dominance of personal private vehicles. Land-use policies embodied in our reliance on private vehicles feed commercial and residential suburban sprawl that directly and indirectly increases GHG, as well as marginalizing economically disadvantaged communities and groups like the elderly and youth that rely on public transit. Low-wage households living far from employment centers spend almost 40% of their incomes on transportation; in contrast low-wage families in neighborhoods well served by public transit spend about 9% on transportation.

Public transit has been recognized by the US Centers for Disease Control (CDC), the American Public Health Association (APHA), and the Union of Concerned Scientists as a pivotal mode to reduce greenhouse gas emissions as well as a wide range of air pollutants that are linked to respiratory and cardiovascular illness. Electric vehicle use per se would not increase physical activity: every additional hour spent in a car – electric or fossil-fueled – is associated with a 6% increase in the risk of obesity and every kilometer walked is associated with a 5% decrease in obesity risk. Public transit users walk a median of 19 minutes daily getting to and from transit stops. Nearly 30 percent of transit users exceed the 30 minutes of recommended physical activity per day.

The only way Rhode Island can dramatically reduce its greenhouse-gas emissions is to transform its transportation sector by expanding public transit and supporting alternative modes of movement. Embracing those two would also create jobs and address social inequity.

Funding for Public Transit

Public transit in Rhode Island does receive significant federal support from several pots of federal transportation programs especially for capital projects (purchase and maintenance of buses and vans). The budget to operate the system is funded from a portion of the gas tax. It has been broadly recognized that our state’s current funding mechanism (the gas tax) is inadequate to sustain and expand public transit. And in fact as more car and vehicle purchases may shift to electric vehicles this further erodes this principle funding source. There should be an alternative funding mechanism created which ties mitigating impacts from climate change to expanding transit which reduces greenhouse gas (GHG) emissions. One of the principle goals of the multi-state Transportation & Climate Initiative (TCI) is to propose new revenue

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In order to assign respirators, employers must provide a medical evaluation
Written operating procedures for the selection and use of respirators
Respirators come in two basic families. The first are Air Purifying
Respirators like N95s the whole respirator is the filter; whereas elastomeric
Respirators (APRs). Respirators of this type reduce toxins in the surrounding
high risk, and other activities and areas as medium or low risk. Respirator
Respirators were first developed to protect against industrial and mini-
respirators. And, conditions like lack of oxygen or other IDLH (Immediately
Dangers to Life and Health) conditions will require special respirators.
Workers must be instructed in the proper use and limitations of their
Some Selected Critical Elements of the
- training of employees on the respiratory hazards to which they are
- procedures for selecting respirators for use in the workplace.
- medical evaluations of employees required to use respirators.
- fit testing procedures for tight-fitting respirators.
- procedures for proper use of respirators in routine and reasonably
- procedures for respirator change schedules.
- procedures to ensure adequate air quality, quantity, and flow of
- program evaluation of the respirator protection program.

Additional medical evaluations may arise if the PLHCP (or the program
administer the Respiratory Protection Program) is informed by the
work related medical conditions that could make it unsafe for the employee to wear the assigned respirator(s).

FIT Testing
A worker must be fit tested on the type of respirator they will wear to ensure that it will protect against the associated hazards. FIT testing must be performed before an employee is required to wear the respirator in the workplace. And, the PLHCP medical evaluation of that employee must be prior to fit-testing. If the fit-testing indicates a need for employee reevaluation.

APR respirators are effective if they channel air the user inhales through the appropriate filter, and cartridge/canister that capture toxins. To do this must effectively, the mask must be tightly fitted under the chin and around the face and head, and the straps must be firmly and correctly fitted around the head. (This is why boards are prohibited when wearing tight-fitting respirators.) If the fit is not snug, toxins (and with biological threats, the microorganisms) can leak into the mask along the sides or under the chin and will not be captured by the filter, canister/cartridge. And this defeats the protective purpose of wearing the respirator in the first place.

FIT testing is not a simple process but requires technical knowledge, experience and expertise. Why? Any respirator is rated as to how well they protect the worker; each has an assigned protection factor (APF) that indicates how well that respirator (or class of respirators) protects the user. In addition, there are workplace exposures which automatically require a respirator that is more protective (has a higher assigned protection factor).

FIT testing involves a set of OSHA approved protocols that involves evaluating the fit of a respirator on that individual and involves using certain test agents or calibration equipment systems in a test chamber as well as using model fit testing systems or from the NIOSH Respiratory Equipment
It is very much a hands on procedure that takes some time as usually many different respirator models may have to be evaluated for the tested worker.

FIT testing must be repeated at least annually.
- FIT testing may be conducted whenever changes occur that could affect the proper use of the respirator.
- Some facilities have experienced fit testers on staff. Others will need to reach out. An employer can contact the following for direction: local occupational health and safety professional programs; the local OSHA office for compliance assistance; the Automation and Industrial Hygiene and professional organizations such as the American Industrial Hygiene Association (AIHA.org), American Society of Safety Professionals ASSP.org.

Program Administration
Employers must designate an administrator to run the entire respirator program. This person must be knowledgeable on a wide range of responsibilities:
- What OSHA requires of a Respiratory Protection Program.
- Training of employees on the respiratory hazards to which they are exposed, and training on the elements of the respiratory protection program that impact their use.
- Procedures for selecting respirators for use in the workplace.
- Medical evaluations of employees required to use respirators.
- Fitting procedures for respirators.
- Procedures for proper use of respirators in routine and reasonably anticipated scenarios.
- Procedures for respirator change schedules.
- Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere supplying respirators.
- Program evaluation of the respiratory protection program.

Some Selected Critical Elements of the OSHA Respiratory Standard:

Workers must be instructed in the proper use and limitations of their respirator(s).
- Program for the care and maintenance of respirators should include:
  - inspection of defects or malfunction
  - cleaning and disinfecting
  - repair,
  - storage.
- Respirators should be inspected before and after each use. Inspection should include checking for any leakage, for the tightness of the connections, for the condition of the headband and face piece, and for filters, cartridges/canisters. (With air supplied systems: condition of the tank, lines, connectors, regulators, alarms, etc.)

A respirator used on the face should be checked each time it is used. This is called a seal check and should not be confused with a fit test which is the process that determines right respirator for use by each worker.

Respirators that are used for emergencies should be automatically inspected at least monthly.
- Respirators should be regularly cleaned and disinfected; it used by more than one worker.
- Work areas must be monitored to ensure that they are clean and that the respirator is being used as intended.

This is a basic review; we recommend you consult the OSHA website (www.osha.gov for more details).
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sources.

Over the last few years coalitions of transit advocates have proposed several planks that in the short term and in the long term promote alternative funding sources for public transportation to reduce GHG emissions:

- Require developers to emphasize and fund transit-oriented development and pedestrian mobility in all new development projects in the design phase and embed such requirements in the contractual and bid process.
- Establish congestion pricing plan in central metro areas to reduce gridlock, GHG emissions and air pollutants and raise money for various transit, biking and enhanced walking infrastructures;
- Expand and enhance transit subsidizing projects like the ECO pass and the UPASS where business and universities provide free or subsidized passes to ride RIPTA.
- Encourage large institutions, especially those that are tax exempt and large businesses to adopt bus routes as a community service by funding some operational costs, distributing and posting schedules, notifying employees, customers, clients, etc. This is similar to programs which encourage private firms to adopt a stretch of highway.
- Prioritize the search for alternative funding for public transit—which currently depends on the gas tax. Establish various Greenhouse Gas Emission [GHG] or Vehicle Miles Traveled (VMT) taxes on electric vehicles and on gig economy transport (UBER eg.).

This COVID-19 Awareness Training will be offered every Tuesday and Thursday 10am to 12am

For more information contact:
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This course is designed to:
- Prepare workers and communities for COVID-19 and other infectious diseases;
- Provide knowledge and practical experience in infection control guidelines and procedures for all workers in jobs with potential exposure to Coronavirus.

This course covers:
- Specific virus types and how they spread;
- Best practices for preventing exposure to Coronavirus, including proper decontamination;
- Proper selection and use of personal protective equipment (PPE), including respiratory protection;
- Responding quickly to a potential emergency outbreak.

This COVID-19 Awareness Training will be offered every Tuesday and Thursday 10am to 12am

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