

Pathway to Recovery and Resiliency in Transportation

Public Health Solutions for COVID-19 in Aviation and Public Transportation

Restoring customer confidence and long-term economic stability in air travel and public transit

Public transportation has suffered tremendously from COVID-19 and subsequent restrictions on travel and public gatherings. Experience with infectious diseases shows that comprehensive health screening for travelers creates a pathway to reducing pathogenic threats and to economic recovery. As a leader in aviation and transportation, Ross & Baruzzini has identified necessary steps to create resiliency within those sectors. Our model for passenger and employee health screening and other measures includes:

Processes and Technology – A strategy and goals to support recovery and ongoing resilience within public transportation relative to pathogenic outbreaks. Policies, procedures, and technology address links between public health and transportation;

Coordination, Guidance, and Policy – Lessons learned in the aviation sector in addressing threats post-9/11 are used to identify policy direction, existing guidance, and coordination needs among various disciplines and levels within the public and private sectors; and

Roadmap to a Better Future – National policy, protective strategies, and tactical approaches are identified to yield a resilient public transportation sector effectively coordinated with the public health sector.

Passenger-Focused Procedures

Passengers should be screened via primary and secondary screening processes. Authorities and abilities to conduct passenger health screening are required within both the public health and transportation sectors.

Options to support passenger health screening at airports include: 1) Utilize TSA; 2) Utilize the U.S. Public Health Service or other HHS resources, and 3) Utilize local public health agencies in each airport's jurisdiction. Options require legal and regulatory amendments and funding. Primary passenger health screening is premised on a temperature threshold of 100.4 F and a questionnaire. Affirmative results in primary screening lead to secondary screening by medical professionals. Ideally, real-time testing is available for secondary health screening.

Bags should not be screened as there is no timely or accurate manner in which to test bags relative to COVID-19. Bags should be processed using appropriate UV disinfection or other non-invasive disinfection processes.

Employee-Focused Procedures

Contact Tracing – Contact tracing is used commonly among epidemiologists to track pathogenic infections in people who may have been exposed to known afflicted patients. The goal is to identify those persons with whom an infected person may have had contacts during the period in which the disease is communicable. Contact

tracing is generally performed in a remote environment via a questionnaire designed for a specific pathogen. This concept is recommended as a method to clear essential asymptomatic employees for duty or to remove them from service to avoid infecting other essential employees during a potential or verified pathogenic scenario.

Contact tracing for essential employees is most effective for those employees who are typically isolated from the general public. As an example, employees working in tight quarters such as an air traffic control tower or airport operations center should be cleared for duty to ensure that they can continue to perform essential functions without infecting or being infected by other team members. Clearing employees for duty via contact tracing and implementing other protective strategies can provide a level of confidence that they can remain healthy and perform essential functions.

Hygiene and Universal Precautions – As recommended by the CDC and World Health Organization (WHO) or other public health authority, airports and other transportation sectors should implement hygiene procedures consistent with guidelines specific to the pathogen of concern. For all personnel, and particularly essential personnel who are exposed to the general public, universal precautions should be employed. Universal precautions require that all blood, bodily fluids, and uncontrolled surfaces to be treated as if they contain the pathogen of concern. Accordingly, all appropriate engineering and work controls should be utilized consistently.

Employee Assistance Programs – Employees working in essential functions during a crisis endure stress, which is compounded if they are concerned about the safety and well-being of loved ones. Therefore, it is vital to institute measures to address employee and family welfare. Considerations include communications programs, mental health services, healthcare, and financial assistance.

The Physical Environment

Buildings/Facilities and Aircraft – Consistent with the CDC and WHO, hygiene should be enhanced in public areas with special consideration given to common areas, such as restrooms, halls, corridors, lifts, and other spaces, as a general preventive measure to pathogenic exposure. In particular, attention should be given to objects that are frequently touched, such as handles, elevator buttons, handrails, switches, doorknobs, and other surfaces. Non-invasive methods of disinfection, such as Ultraviolet radiation, are recommended to expedite the process.

Self-Check-in. The concept of self-check-in eliminates or reduces traveler-to-personnel interaction and is preferred to traditional check-in procedures. However, disinfectant wipes must be available for use on the check-in screen and

counter between check-ins. If regular person-to-person interactions are required for check-in, plexiglass shields should be considered for agents to provide a barrier between the agent and passengers.

Soap Dispensers. Bathrooms should be monitored regularly to ensure proper functioning and supply of soap and disinfectant solution dispensers, hand dryers, disposable tissue dispensers, and other similar devices. Defective units should be rapidly repaired or replaced. Also, consider installing units to dispense disinfectant gel throughout airports at entryways and in dining halls, restaurants, and bars. To the extent possible, touchless soap dispensers, water faucets, and hand driers/towel dispensers are recommended.

Heating, Ventilation, and Air Conditioning. Although COVID-19 is not transmitted solely by air, attention should be given to monitoring the condition of filters and maintaining the proper replacement rate of indoor air. Adequate functioning of ventilation, air exchange, and dehumidification equipment should be maintained.

Concessionaires/Vendors – In addition to general hygiene practices, buffets, tables, and all surfaces in dining areas should be disinfected after each use. It is recommended to have a maximum of 4 persons per 100 square feet (10 square meters). Tables should be arranged so that the distance from the back of one chair to the end of another chair shall be more than 3.5 feet apart and that guests face each other also at least 3.5 feet apart.

National Policy

National policy is recommended, which incorporates a broadly coordinated strategy using expertise from the aviation and public health sectors. As a public health crisis, health and medical expertise regarding control of COVID-19 are vital to developing and implementing an effective strategy. Likewise, it is crucial to balance the needs of airports and other public transportation entities to maintain security and to create an environment that conveys confidence among the traveling public. Passenger health screening stands out as the Essential primary elements of a successful passenger health screening model include:

- Processes vetted by public health professionals to identify practical, efficient, and safe protocols;
- Coordination with a broad base of airport stakeholders to identify optimized solutions for screening;
- Multiple models for assignment of screening duties among TSA and public health officials at various levels of government and flexibility to accommodate different airport layouts;
- Queuing analysis to identify models for expedited screening; and

- Assessment of necessary resources based on airport hub-size and various passenger throughput models.

Engaging the Public

Passenger health screening is intended to instill confidence in air travel. Therefore, it is essential to formulate a communication campaign to engage the public. Public communications should clearly and concisely explain the purpose of passenger health screening, the process travelers can expect, including approximate time for screening, and the parameters for travel/no travel determinations. While intended to instill confidence, communications should also serve an educational purpose to alert travelers that plans should be reconsidered if they are exhibiting symptoms. Communication regarding passenger health screening is recommended via television, radio, social media, and print media to reach a broad audience.

Toolkit for Disease Management in Airports

A toolkit designed specifically for airports is recommended for airport authorities and stakeholders. The toolkit should include: procedures to support employee and passenger health screening and other disease control measures; engagement with regulatory agencies and coordination with elected/appointed officials; layout analysis to support implementation of health screening; communications planning for queuing passengers to health screening areas; design of health screening facilities, equipment, and wayfinding; and engineering and construction guidance.

About Ross & Baruzzini

As a leader in the aviation and transportation, Ross & Baruzzini developed the concepts described to support expedited recovery within the various transportation sectors, to create resiliency relative to public health, and to serve the United States and the world with a model for recovery and resiliency in transportation.

Founded in 1953, Ross & Baruzzini has been consistently ranked as one of the premier consulting engineering companies in the country, most recently in Building Design & Construction's Top 40 engineering companies in the United States. We have been recognized among the Top 500 design and construction firms in Engineering News-Record.

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