

**Testimony of  
Professor David Michaels  
The George Washington University**

**Hearing Before the United States Congress  
House Committee on Transportation and Infrastructure**

***Protecting Transportation Workers and Passengers from COVID: Gaps in  
Safety, Lessons Learned, and Next Steps***

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Thank you, Chairman DeFazio and Ranking Member Graves for inviting me to testify at this important hearing addressing the COVID-19 pandemic, one of the most pressing and difficult issues facing the nation today.

My name is David Michaels. I am an epidemiologist and Professor of Environmental and Occupational Health at the Milken Institute School of Public Health of George Washington University. The views expressed in my testimony are my own and do not represent the views of George Washington University.

From 2009 until January 2017, I served as Assistant Secretary of Labor for the Occupational Safety and Health Administration (OSHA), the longest serving Assistant Secretary in OSHA's history. From 1998 to 2001, I was Assistant Secretary of Energy for Environment, Safety and Health, charged with protecting the workers, community residents and environment in and around the nation's nuclear weapons facilities. I am currently a member of the Board of Scientific Counselors of the US National Toxicology Program, appointed by Health and Human Services Secretary Alex M. Azar in 2019.

Since the COVID-19 pandemic began, much of my work has focused on improving the protection of workers exposed to SARS-CoV-2.<sup>1,2</sup> I was a member of the [Biden-Harris Transition COVID-19 Advisory Board](#); served on the National Academy of Sciences, Engineering and Medicine's expert panel that developed a [Framework for Equitable Allocation of Vaccine for the Novel Coronavirus](#); and am a member of the [Lancet COVID-19 Commission's](#) Task Force on Safe Work, Safe School, and Safe Travel.

COVID-19 has created an unprecedented public health crisis, one that has had a huge impact on the transportation sector. Workers need better protection to avoid illness and death, passengers need reassurance that they can travel without fear of infection and the industry needs safe workers and willing passengers to survive in this difficult period.

My testimony today focuses on the COVID-19 risks facing workers and passengers who travel by air, bus, train, ship and mass transit. While many of the challenges facing this sector are similar to those facing other essential industries, there are aspects that are unique and require approaches and solutions that are new, bold and immediate.

The United States is facing a massive worker safety crisis. As the COVID-19 pandemic has continued to devastate the nation, millions of workers continue to risk their lives by continuing to

go into work to care for the nation's sick and elderly, to help families put food on their tables, to ensure public safety and to get people to and from work and to destinations near and far. The toll on these essential workers—and on their families and communities—has been enormous.

There are inadequate data on the extent of COVID-19 infection related to exposures in the US in general and, specifically, in the transportation sector. The federal government collects almost no data on the job or occupation of most cases of COVID-19. Anecdotally, we learn of powerful tragic stories, like that of [Jason Hargrove](#), a bus driver from Detroit who died of COVID-19 eleven days after he reported on a video about a passenger on his bus who was openly coughing without covering her mouth. Articles in the press have alerted the public to the large number of cases and deaths among passengers and workers on cruise ships, as well as the [suicides](#) that have occurred among the [tens of thousands of workers who have been stranded on these ships](#) after the passengers were allowed to disembark.

As you are hearing today from other panelists, unions representing transportation sector workers have seen large numbers of members sickened and, in many cases, killed by the virus, but comprehensive statistics on workers or passengers are unavailable.

There is no question that, without adequate protections, the risk of infection is high among both transportation passengers and workers. There are numerous studies demonstrating that exposure in transportation greatly increases risk of COVID-19. In [one outbreak reported from China](#) that occurred early in the epidemic, before precautions were implemented, a single individual transmitted the virus to more than one-third (23 of 67) of their fellow passengers on a bus trip of just a few hours.<sup>3</sup>

Having virtually no reliable data on work-related COVID-19 in the United States, we must look to studies undertaken abroad. There is convincing empirical evidence from studies in other countries that workers employed in transportation, including flight attendants and bus drivers, are at greatly increased risk for infection.

A [study of COVID-19 cases by occupation in Norway](#), where there are complete data on occupation of cases, found that in the first wave of the pandemic (Feb 26-July 17, 2020), bus and tram drivers had a more than five-fold excess risk of infection. By the second wave (July 18-October 20, 2020) when improved precautions were implemented, these drivers still had a 70% increased risk of infection, but the risk of infection among travel attendants and travel stewards, a category that includes flight attendants, had almost five-fold excess risk.<sup>4</sup>

Bus and coach drivers were also found to have elevated risk of death from COVID-19 in the [United Kingdom](#),<sup>5</sup> and, in [Sweden](#), bus and taxi drivers have “substantially heightened” risk of both COVID-19 infection and death.<sup>6</sup>

We know what is necessary to protect both transportation workers and passengers. Every organization that operates a transportation system must develop a plan to prevent virus exposure. Infection control is not simple or easy and requires the active cooperation of everyone involved. In general, successful hazard control initiatives require worker involvement in all aspects of [Safety and Health Management System](#). This is even more true of an infection control plan;

workers have the most to lose if the plan fails, but if they do not have some ownership in the program, it is less likely to succeed. For these reasons, the plan can't simply be imposed by fiat. It must be developed, implemented, and continuously evaluated with the input and collaboration of the workers, including, if there is one, the workers' union.

The infection control plan must be based on the "[hierarchy of controls](#)", the widely applied set of principles to prevent workplace health hazards that is the basis for OSHA's policies and the modern practice of industrial hygiene. The application of the hierarchy of controls to the prevention of virus transmission in transportation is outlined below.

The most effective way to reduce exposure is to keep people who may be spreading the virus home. Workers need to be supported financially to enable them to quarantine or isolate as appropriate and requiring this of small employers may be particularly burdensome. There is compelling evidence that the emergency sick leave provision of the bipartisan Families First Coronavirus Response Act (FFCRA) was successful in not only providing badly needed financial support for workers who were required to isolate or quarantine, but in [helping prevent hundreds of COVID-19 cases](#).<sup>7</sup> Unfortunately, this life-saving program ended Dec. 31, 2020. Government support for paid sick leave helps prevent transmission to passengers and other workers and levels the playing field for employers. Renewing this program should be a very high legislative priority.

Since it will not be possible to ensure that all potentially infectious individuals remain at home, the next steps are to limit exposure to the virus. It is now understood that the virus can be spread by tiny aerosol particles and by larger, although still tiny, droplets. Masking is the first line of source control; facial covering will prevent much of the virus exhaled by an infected person from entering the environment. Once the virus is in the air, efforts must be made to prevent it from being inhaled by others, preferably by eliminating it from the environment. It is of great importance to keep individuals (even masked individuals) as far apart as possible. The often-cited requirement is six feet between people, but that is an arbitrary distance, and more is always desirable. But even six feet is impossible in most transportation settings. This underscores the particular need for mandatory masks, maximizing ventilation, and ensuring appropriate filtration systems. In many cases, ventilation and filtration on buses and other modes of public transportation will need to be improved.

In some situations of high exposure risk, workers may be given personal protective equipment (PPE), such as N95s or other respirators. These have a different objective than the masks discussed above. Those are to reduce viral load in the air and do not protect the individual from exposure; PPE is meant to protect the wearer.

Hand sanitation and disinfection must be included in the infection control plans, as well. Workers must be given the opportunity, proper disinfecting agents, and enough time to wash their hands and take any other precautions necessary to reduce exposure risk.

Whistleblowers play a vital role in identifying hazards and protecting themselves and their coworkers. Employers should welcome the concerns they raise, because workers are often the first to spot conditions that may result in exposure to themselves, to other workers, or to the public. From the first report of a Washington State physician being [fired after raising safety](#)

[concerns](#),<sup>8</sup> there have been numerous reports of retaliation against workers for raising safety concerns with their employer or with OSHA, or for using their own personal protective equipment when management did not supply adequate protection.<sup>9</sup>

For these reasons, plans must include provisions to encourage workers to raise concerns, along with assurances that they will not suffer retaliation if they do. This sort of retaliation is against the law under numerous transportation statutes as well as the OSHA law, and employers should know they risk significant penalties for violating these statutes.

One aspect of the pandemic that crosses all sectors is the failure of leadership of the previous administration. There was no national plan for addressing the pandemic and reducing virus transmission in workplaces, schools or transportation. Much of this was left to the states, which, given the interstate or global nature of transportation, meant that little or nothing was done by government agencies to mitigate exposure on all commercial modes of interstate travel. Both the Occupational Safety and Health Administration and the Department of Transportation (DOT) refused to issue enforceable regulations to protect workers, or, in the case of DOT, passengers and workers. Efforts by the Centers for Disease Control and Prevention (CDC) to require masks in transportation [were blocked by the White House](#).<sup>10</sup>

Fortunately for the nation, the Biden Administration is now stepping up efforts to prevent community and workplace transmission. There is now a national plan to control the pandemic and enhanced workplace protections are a component of this plan.

The CDC has issued an order, effective February 1, 2021, requiring all passengers and workers on global and interstate transportation wear masking:

This Order must be followed by all passengers on public conveyances (e.g., airplanes, ships, ferries, trains, subways, buses, taxis, ride-shares) traveling into, within, or out of the United States as well as conveyance operators (e.g., crew, drivers, conductors, and other workers involved in the operation of conveyances) and operators of transportation hubs (e.g., airports, bus or ferry terminals, train or subway stations, seaports, ports of entry) or any other area that provides transportation in the United States.

People must wear masks that cover both the mouth and nose when awaiting, boarding, traveling on, or disembarking public conveyances. People must also wear masks when entering or on the premises of a transportation hub in the United States.<sup>11</sup>

Enforcement will require active collaboration between the Transportation Security Administration, Department of Transportation agencies and transportation systems. The Biden Administration is also increasing efforts to speed up vaccine production and vaccination rates, but until most of the nation is vaccinated, stopping exposure in transportation will remain of paramount importance, and a significant challenge. There are structural reasons this will be particularly difficult for the transportation sector.

OSHA, the primary federal agency with authority in worker safety and health, has strengthened its recommendations for worker protections and is likely to issue an Emergency Temporary Standard which would apply to the millions of employers under that agency's authority.

However, for the most part, many of the workers in the transportation sector most at risk for exposure to COVID-19 are not covered by OSHA regulations or enforcement. Section 4(b)1 of the OSHA law states:

Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies... exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.

Applying this unfortunate part of the OSHA statute, many DOT agencies with weak or no worker protections or enforcement have pre-empted or significantly restricted the application of OSHA regulations. The result is that for large numbers of transportation employees, their workplaces are OSHA-free zones.

In addition, OSHA does not cover public employees in twenty-four states which means that transportation workers who are employed by public entities have no legal right to a safe workplace in those states.

It is important for the safety of transportation workers that Congress pass legislation providing OSHA protections to public employees and that requires OSHA and the Department of Transportation to reach an agreement providing protection for transportation employees equal to that provided other workers as a result of OSHA's Emergency Temporary Standard.

One of the lessons of the first ten months of the pandemic in the US is that [voluntary government recommendations are not adequate to protect workers](#) and the public. General recommendations for mask use were ignored by a sizable minority of people, contributing to uncontrolled spread in many locations. For example, OSHA and CDC recommendations to employers in the meat and poultry industry have not been successful in stemming workplace transmission in this industry.

By making only recommendations, federal agencies shift the burden of enforcement on to employers. Recalcitrant passengers are far more likely to follow requirements if they are imposed by federal or state agencies, compared with policies of the operator, who have little ability to punish passengers who refuse to comply. Further, federal regulations level the playing field so that, if investment is required, employers who want to do the right thing and protect their employees are not at a disadvantage competing with low-road employers who have less commitment to worker safety.

The objective must be to stop exposure to the virus in all modes of transportation in which people from unrelated households travel. The CDC's mask requirement is a valuable and vitally important first step. Now is the moment for federal transportation agencies to take the steps necessary to require all transportation systems and the transportation hubs under its jurisdiction to develop and implement comprehensive infection control plans applying the hierarchy of controls. The details of these required plans will need to be developed by federal public health experts, with the input of employers and unions representing the workers involved.

While these must be enforceable requirements to be effective, at the moment, it will be extremely difficult for the DOT agencies involved to actually enforce them. To enhance enforcement, some DOT agencies may have to cede some authority to OSHA. This can be done;

in 2014, the FAA and OSHA signed a [Memorandum of Understanding](#) enabling OSHA to enforce its hazard communication, bloodborne pathogens and noise standards to the working conditions of aircraft cabin crewmembers while they are on aircraft in operation.<sup>12</sup> This committee should strongly encourage these agencies to quickly develop joint regulatory and enforcement efforts with OSHA.

Given the extent of exposure among transportation workers, prioritizing vaccination of those workers at high risk is of great importance. However, the state-based system of vaccine allocation may make this prioritization more difficult, since workers involved in interstate and global transportation are often in cities other than those that they call home. (While this is a significant concern for many transportation workers, it is a particularly intractable problem for seafarers, who are at elevated risk of workplace exposure and disease, and who have little ability to register for and receive a vaccination in their home state in a timely manner.) The federal government should establish a comprehensive COVID-19 vaccination program specifically for transportation workers and provide the vaccines at hubs that they pass through for work.

In summary, ensuring the safety of passengers who rely on transportation systems, their workers, and the communities in which passengers and workers live, is of critical importance to the future of the country. If transportation is not safe, we will not be able to stem the epidemic and return the economy to normalcy.

I urge this committee to do all within its power to advance programs that prevent transmission of COVID-19 in all means of transportation under its jurisdiction. Universal masking is an important step, but it is not sufficient. Workers and passengers need operators to develop and implement comprehensive infection control plans based on the hierarchy of controls. DOT agencies must collaborate with OSHA and other federal agencies to enforce this requirement.

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