

United States Senate
WASHINGTON, DC 20510

November 1, 2022

The Honorable Billy Nolen, FRAeS
Acting Administrator
Federal Aviation Administration
800 Independence Avenue, SW
Washington, D.C. 20591

Dear Acting Administrator Nolen,

We write pursuant to Docket Number FAA-2022-1001, Request for Comment in Minimum Seat Dimensions Necessary for Safety of Air Passengers (Emergency Evacuation). We share your aim in ensuring the safety of air travel for all of the flying public. In advance of promulgating any rules, we urge the Federal Aviation Administration (FAA) to comprehensively review the safety factors impacting seat pitch, width, and length and ensure that such safety factors take into account the entirety of the American public – including children, senior citizens, individuals with disabilities, and others. To prevent further harm to travelers in the interim, the FAA should immediately issue a moratorium prohibiting additional reduction in seat size.

Unfortunately, shrinking seat sizes are not new. As you know, airline seats have shrunk over the last few decades across multiple dimensions. Since at least the 1990s, seat pitch has decreased from 32 inches to 28 inches and seat width from 19 inches to as little as 16 inches.¹ While there is some variability among airlines, the trend is clear – to the detriment of passengers. It cannot continue.

In 2018, Congress was clear in its mandate to the FAA: seat sizes must not get smaller. Section 577 of the FAA Reauthorization Act of 2018 states the FAA “shall issue regulations that establish minimum dimensions for passenger seats on aircraft... including minimums for seat pitch, width, and length, and that are necessary for the safety of passengers,” within one year of the bill’s passage.² It is regrettable that more than three years after the deadline for issuing the rule, the FAA is just now collecting comments.

As a step towards meeting this requirement, and in compliance with Section 337 of the FAA Reauthorization Act of 2018, which directed the FAA to review emergency evacuation procedures (including the effect of seat size on egress), the FAA conducted simulated emergency evacuations at the Civil Aerospace Medical Institute (CAMI). These simulated evacuations took place in late 2019 and early 2020, after the deadline to issue a rule regarding minimum seat

¹ Bill McGee, “Think airline seats have gotten smaller? They have,” *USA TODAY*, September 24, 2014, (McLean, Virginia), <https://www.usatoday.com/story/travel/columnist/mcgee/2014/09/24/airplane-reclining-seat-pitch-width/16105491/>; “Long-haul Economy Class Comparison Chart,” SeatGuru, https://www.seatguru.com/charts/longhaul_economy.php (accessed October 19, 2022); and “Short-haul Economy Class Comparison Chart,” SeatGuru, https://www.seatguru.com/charts/shorthaul_economy.php.

² FAA Reauthorization Act of 2018, Pub. L. No. 115-254, 132 Stat. 3186.

dimensions. The resulting study ultimately found that seat pitch and width did not have a statistically significant effect on egress for able-bodied passengers.³ However, the study had significant limitations. The FAA acknowledged as much, saying the study provided “useful, but not necessarily definitive” information about the impact of seat size on safe evacuation.⁴ We strongly support a rule that ensures reasonable minimum seat dimensions on airlines but worry the study by the FAA and CAMI has failed to fully investigate health and safety risks.

One of the most glaring flaws of the FAA and CAMI’s study is that it does not accurately account for the entirety of the flying public. All participants in the study ranged from 18- to 64-years-old and were able-bodied. This is simply not representative of the population. Plane travelers comprise children, senior citizens, individuals with disabilities, and more who were not given the option to participate in the study. Without input from these critical communities, the FAA cannot be sure of the impact of seat size on egress during an emergency evacuation, much less on passenger health and safety.

In addition, the FAA and CAMI’s study alone should not be the sole source of safety information that informs the FAA’s rulemaking. Previous studies have demonstrated that success of emergency evacuations also rely on, inter alia, emergency lighting, crewmember actions, and airplane configurations like aisle width.⁵ Evacuations are a critical part of passenger safety – but no one safety factor should outweigh the rest. Crew and passenger seats, for example, must be designed to avoid head injuries and leg injuries during emergency landing conditions.⁶ Travelers on long flights are also at increased risk for blood clots (also known as deep vein thrombosis) that could lead to a pulmonary embolism, posing serious, long-term health consequences.⁷ Long seated periods with limited leg movement heightens this risk, and potential impacts from seat dimension modifications cannot be overlooked. The FAA must carefully analyze and study the broad impacts of reduced seat sizes on passenger health and safety before issuing a rule.

We urge the FAA to conduct further research – including substantiation of the study produced by CAMI and a new study if necessary – to ensure that passenger safety and health from airplane seat size is thoroughly considered. Such research must include engagement with and representation from all communities who travel via airplane, including senior citizens, children, individuals with disabilities, and others. In addition, such research must consider safety factors beyond egress: bodily injuries, long-term health impacts, and more must all be taken into

³ U.S. Department of Transportation, Federal Aviation Administration, Office of Aerospace Medicine, Civil Aerospace Medical Institute, *Effects of Airplane Cabin Interiors on Egress I: Assessment of Anthropometrics, Seat Pitch, and Seat Width on Egress*, by David B. Weed, Melissa S. Beben, David J. Ruppel, Kelly J. Guinn, and Susan M. Jay, Final Report DOT/FAA/AM-21/01, Federal Aviation Administration Civil Aerospace Medical Institute (Oklahoma City, Oklahoma), https://www.faa.gov/data_research/research/med_humanfacs/oamtechreports/2020s/media/Effects_of_Airplane_Cabin_Interiors_on_Egress_I.pdf.

⁴ Steve Dickson to Maria Cantwell, March 31, 2022, <https://www.faa.gov/sites/faa.gov/files/2022-03/PL-115-254-Sec-337-Aircraft-Cabin-Evacuation-Standards.pdf>.

⁵ Department of Transportation, *Effects of Airplane Cabin Interiors*, 5.

⁶ U.S. Department of Transportation, Federal Aviation Administration, “Advisory Circular: Transport Airplane Cabin Interiors Crashworthiness Handbook,” 24, https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_25-17A_CHG-1.pdf (accessed October 19, 2022).

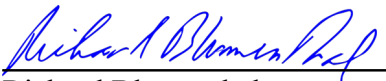
⁷ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, “Blood Clots and Travel: What You Need to Know,” <https://www.cdc.gov/ncbddd/dvt/travel.html> (accessed October 29, 2022).

account. Without this representative and comprehensive analysis in advance of a rule establishing minimum airline seat sizes, we worry any rule issued by the FAA will not adequately protect the safety and health, including well-being, of all passengers on an airplane.

Moreover, in advance of such a rule, the FAA must put a stop to further reductions in seat size. Despite its flaws, the FAA and CAMI's study demonstrates – as a baseline – that seats cannot be permitted to shrink any more. The study conducted evacuations using measured seat pitches of 28, 32, and 34 inches, with an experimental pitch of 26 inches, and seat widths of 16 and 18 inches. When confronted with the 26 inch pitch, two-thirds of participants found the seats “very difficult” or “difficult” to get into and out of, and more than three-quarters of participants thought they would be “very unsafe” or “unsafe” on flights longer than two hours. The study concluded seats with a 26 inch pitch could be “a possible detriment in an evacuation.”⁸ The study also found mean passenger shoulder width to be 18.9 inches – almost three inches wider than the current width of seats available on certain commercial flights.⁹ Given these findings, the FAA cannot wait for seats to get any smaller. We urge the FAA to immediately prohibit any reduction in size, width, or pitch of seats on airplanes, the amount of leg room per seat, and the width of aisles on such planes until a final rule is issued.

Thank you for your consideration of our concerns. We look forward to working with you on a final rule that ensures adequate minimum seat dimensions necessary for the health and safety of all air travel passengers.

Sincerely,



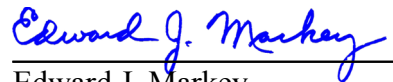
Richard Blumenthal
United States Senator



Charles E. Schumer
United States Senator



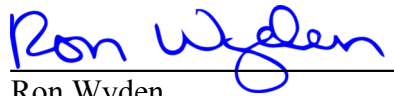
Dianne Feinstein
United States Senator



Edward J. Markey
United States Senator

⁸ Department of Transportation, *Effects of Airplane Cabin Interiors*, 34, 35, 42.

⁹ Department of Transportation, *Effects of Airplane Cabin Interiors*, 29.



Ron Wyden
United States Senator



Sheldon Whitehouse
United States Senator