

Research shows COVID-19 pandemic substantially changed commuting patterns, access to jobs

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Credit: Michael McCarthy with the University of Minnesota Center for Transportation Studies

Patterns of movement in cities, especially office job commutes, were

substantially changed in 2021 by telework, economic change and other responses to COVID-19, according to new research from the Accessibility Observatory at the University of Minnesota. While immediate effects of these behavioral changes, such as reduced congestion and lower transit ridership, have been well-documented, the new data reveal deeper impacts that differ by the three modes studied: [auto](#), [transit](#) and [biking](#).

The most striking finding in the auto analysis was that limits on access to opportunities, primarily due to [traffic congestion](#), during the peak morning travel period were almost entirely eliminated. The study measures accessibility, or access to opportunity, as the number of jobs that a typical worker traveling by auto, [transit](#) or bike can reach within 30 minutes or fewer, on average.

The top 50 most populous urban areas in the U.S. saw significant increases in access to jobs by driving during the morning peak. For example, compared to pre-pandemic travel patterns in January 2020, the typical worker in 2021 in the Atlanta region could reach 82% more jobs; a worker in the Seattle area, 62% more jobs; in Houston, 50% more; in Minneapolis, 42% more.

"These are huge changes to which opportunities people could access with a car—without any big infrastructure or land use changes," said Observatory senior researcher Andrew Owen, lead author of the reports. "Underlying the accessibility increases is a drop in peak drivership that has softened but is not going away—if we can take advantage of this and provide real alternatives to driving alone, we are hopeful that during our lifetimes we can create solutions for congestion without freeway expansion."

Improvement in the auto network was greatest in cities previously most burdened with congestion. The 2021 data shows that morning

commuters in Los Angeles and San Francisco could drive to more than twice as many jobs in the same amount of time as they could the previous January, prior to the pandemic.

And, despite the focus on reports of plummeting ridership nationwide, the jobs that workers could reach via transit in 2021 changed comparatively little across the busiest metro areas even with labor shortages, capacity restrictions due to health concerns and financial uncertainty. "Federal grants for operations early in the pandemic helped maintain access to jobs for essential workers, who needed transit most," said Accessibility Observatory director Eric Lind, co-author of the reports. "The challenge now for transit agencies is to continue to maintain the level of accessibility they have been providing.

The researchers said that the recently published data reveals how changes in travel behavior can drastically improve the usefulness of the transportation system. The most recent analyses—part of a long-running Access Across America study of accessibility to jobs, conducted since 2014—are the first comprehensive national survey of how the changes in daily travel initiated by the COVID-19 pandemic looped back to significantly alter people's access to different job opportunities. The early pandemic period provided an unprecedented opportunity to study how the choices people make, and what they can access, plays out in cities across America.

Annual nationwide data from the National Accessibility Evaluation is used to guide key transportation and land-use policy decisions. State departments of transportation, metropolitan planning organizations and transit agencies can apply the data to performance goals related to congestion, reliability and sustainability. In addition, detailed accessibility evaluation can help in selecting between project alternatives and prioritizing investments.

The National Accessibility Evaluation was initiated by the Minnesota Department of Transportation and supported by partners including the Federal Highway Administration and 14 additional state transportation departments. The University of Minnesota's Accessibility Observatory is a leading national resource for the development and application of accessibility-based transportation system evaluation.

Provided by University of Minnesota

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