South American Publishing

SAP Transport, Mobility & Society. 2024;3:74
doi: 10.62486/tms202474

ORIGINAL

Daily person travel in the United States before and after the pandemic: trip frequency, purpose and travel time

Viajes personales diarios en Estados Unidos antes y después de la pandemia: frecuencia, propósito y tiempo de viaje

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Submitted: 22-02-2024 | Revised: 22-04-2024 | Accepted: 22-06-2024 | Published: 26-06-2024

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ABSTRACT

Introduction: Daily travel changed markedly in the United States after the onset of the coronavirus pandemic, but the shift in trip frequency, purpose and travel time has not been quantified with nationally representative travel diaries. Methods: Two cross-sectional national household travel surveys, the 2017 National Household Travel Survey and the 2022 NextGen National Household Travel Survey, were compared using annualized trip weights and person weights. Weighted trip rates, purpose shares and daily travel time were estimated with design-based confidence intervals. Results: Daily person-trips per person fell from 3.37 (95% CI 3.34-3.40) to 2.28 (95% CI 2.22-2.33), a 32.50% decline, and the share of persons making no trips rose from 17.10% to 26%. Daily travel time fell from 74.50 to 58.60 minutes per person while mean trip duration rose from 22.10 to 25.70 minutes. Not home-based trips fell from 32% to 22.20% of person-trips, and home-based work rose from 13.70% to 17.90%. Conclusions: Daily travel in the United States contracted between 2017 and 2022, with fewer trips, more days without travel and a purpose mix that shifted toward home-based activities.

Keywords: household travel survey; trip generation; trip purpose; travel time; telework; United States.

RESUMEN

Introducción: Los viajes diarios cambiaron de forma marcada en Estados Unidos tras el inicio de la pandemia de coronavirus, pero el cambio en la frecuencia, el propósito y el tiempo de viaje no se había cuantificado con diarios de viaje representativos a nivel nacional. Métodos: Se compararon dos encuestas transversales nacionales de viajes de hogares, la Encuesta Nacional de Viajes de Hogares de 2017 y la encuesta NextGen de 2022, mediante pesos anualizados de viaje y pesos de persona. Se estimaron tasas ponderadas de viajes, distribución de propósitos y tiempo diario de viaje con intervalos de confianza basados en el diseño. Resultados: Los viajes diarios por persona cayeron de 3,37 (IC 95 % 3,34-3,40) a 2,28 (IC 95 % 2,22-2,33), una reducción del 32,50%, y la proporción de personas sin viajes subió de 17,10% a 26%. El tiempo diario de viaje bajó de 74,50 a 58,60 minutos por persona, mientras que la duración media del viaje subió de 22,10 a 25,70 minutos. Los viajes no basados en el hogar cayeron de 32% a 22,20% de los viajes, y los de trabajo basados en el hogar subieron de 13,70% a 17,90%. Conclusiones: El viaje diario en Estados Unidos se contrajo entre 2017 y 2022, con menos viajes, más días sin viajar y una composición de propósitos desplazada hacia actividades basadas en el hogar.

Palabras clave: encuesta de viajes de hogares; generación de viajes; propósito de viaje; tiempo de viaje; teletrabajo; Estados Unidos.

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INTRODUCTION

Daily travel, measured as trip frequency, trip purpose and travel time, is a core indicator of mobility and of access to employment, services and social life. The National Household Travel Survey has tracked these dimensions for the United States since 1969, and its summary reports have long served as the reference for national trip rates and travel time budgets.(1)

These measures matter beyond description. Trip-based travel demand models, the standard tool of metropolitan planning, are calibrated on the assumption that per capita trip rates remain stable or grow slowly over time, so a structural change in trip generation propagates directly into the forecasts that guide investment in roads, transit and land use. Between 2001 and 2017 the average number of daily person trips per person flattened and then declined, a break with the sustained growth of previous decades that prompted debate about peak travel and its causes.(2) Shared mobility, population aging and cohort changes were all advanced as explanations for that plateau, although no single factor accounted for it (3).(4) Trip purpose describes what travel is for, and travel time is the scarce resource that households budget across competing activities; both are inputs to equity analysis because the burden of travel falls unevenly across groups.

The 2017 wave recorded a mean of 3.37 daily person trips per person and roughly 75 minutes of daily travel time per person.(1)The coronavirus pandemic then disrupted daily travel through several distinct channels that operated at the same time. Aggregate mobility fell sharply in the first months of 2020 as workplaces, schools and many services closed.(5)Working from home expanded to a large share of the workforce and remained elevated after restrictions eased, redistributing work activity away from fixed workplaces.(6)Online purchasing and delivery substituted for store trips, and the reorganization of work removed both the commute and many of the errand trips chained around it(7).(8)The result was a travel system in which fewer people left home on a given day and those who did leave made different kinds of trips than before. Three dimensions deserve separate attention: how often people travel, for which purposes they travel, and how much time they devote to travel, because each responds to different drivers and each enters planning in a different way.

Most of the pandemic evidence nevertheless relies on smartphone mobility data, single-mode counts or small panels rather than on a nationally representative travel diary. Mobility indices describe movement but not trip purpose or travel time in the population, and panel studies rarely cover the full socioeconomic spectrum. Travel diaries, by contrast, record each trip with its purpose and duration for a probability sample of households, which allows the three dimensions to be estimated together and decomposed by demographic group. A direct comparison of the two most recent household travel surveys across trip frequency, purpose and time use was not available when the 2022 NextGen data were released. The release of the 2022 NextGen public-use files made this comparison feasible for the first time, because it is the first post-pandemic national diary designed to be compared with earlier waves. The objective of this study was to quantify the change in person-trip frequency, trip purpose composition and daily travel time in the United States between 2017 and 2022.

METHODS

This was a repeated cross-sectional comparison of two nationally representative travel surveys, the 2017 National Household Travel Survey and the 2022 NextGen National Household Travel Survey (9).(10) Both instruments use a 24-hour travel diary completed by household members aged 5 years or older on an assigned travel day that runs from 4:00 a.m. to 4:00 a.m.(11). The study population comprised all persons 5 years or older with a completed travel day. Reporting followed the STROBE statement for observational studies.

The 2017 survey used a two-stage design in which households were recruited by mail and then completed a diary on a scheduled date.(12)The 2022 NextGen survey used a one-stage address-based design and was fielded from January 2022 to January 2023, with travel days assigned across all seven days of the week over the thirteen-month period.(11)The 2017 public-use sample included 129,696 households and 264,234 persons, and the 2022 sample included 7,893 households and 16,997 persons. Because a person is recorded in the trip file only when at least one trip was made, the difference between the person file and the trip file identifies persons with zero trips on the travel day. Trips with a purpose or duration recorded as not ascertained were excluded from the corresponding analyses, which removed fewer than 0.1% of trips. No other exclusion was applied. Both surveys are weighted to national control totals for households and persons derived from the American Community Survey, so the weighted estimates are intended to represent the same

national population despite the difference in sample size.

Person-trip frequency was the number of trips recorded per person on the travel day, including persons with no trips. Trip purpose was classified with the survey summary variable TRIPPURP into five categories: home-based work, home-based shopping, home-based social and recreational, home-based other, and not home-based. The 2017 string categories were crosswalked to the 2022 numeric codes using the mapping published in the 2022 user guide, which documents the correspondence category by category.(11)Daily travel time was derived from trip duration in minutes (TRVLCMIN), the door-to-door duration of each trip. Covariates were age group (5-17, 18-34, 35-64, and 65 years or older), sex, worker status for persons 16 years or older, urban or rural residence, and weekday versus weekend travel day. Sex was recorded as reported by the respondent, and worker status refers to employment during the reference period rather than to activity on the travel day.

The home-based classification follows the survey convention in which a trip is home-based when one end is the respondent's home and not home-based when both ends are elsewhere. Loop trips that begin and end at the same location are captured by both instruments and are included in the trip file.(11)The travel day is a single 24-hour period per person, so trip frequency and daily travel time are interpreted as per person per travel day rather than as a multi-day average.

Trip-level estimates used the annualized national trip weight (WTTRDFIN), and person-level estimates used the person weight (WTPERFIN). The 2022 user guide reports that the trip weights are annualized and sum to the national annual person-trip total, while the person weights sum to the civilian noninstitutionalized population aged 5 years or older.(11) Daily person-trips per person were computed as the sum of the trip weights divided by 365 and by the weighted person population. Daily travel time per person was computed analogously from trip duration, and mean trip duration was the weighted ratio of total travel time to total trips. Trip purpose shares were weighted proportions of annualized person-trips. The share of persons with zero trips was estimated from the person file as the weighted proportion of persons who did not appear in the trip file; this measure captures stay-at-home behavior and is reported together with the trip rate because the two statistics jointly describe how much of the decline reflects fewer travelers and how much reflects fewer trips among those who traveled.

Standard errors were obtained by Taylor linearization with the household as the primary sampling unit, which yields conservative intervals in the absence of replicate weights for the NextGen survey.(11)Two-sided 95% confidence intervals were reported, and the two years were compared with a z test on independent samples. Weekday and weekend travel were tabulated separately, and subgroup analyses were repeated by age, sex, worker status and residence as sensitivity checks for the main comparison. The annualized trip weight differs between the two surveys in its day-of-week smoothing, so the daily rate for each year was derived consistently by dividing the annualized trip total by 365; the official control totals reported in the 2022 user guide were used to confirm that the weights reproduced the national annual person-trip count.(11)The choice of the five-category purpose summary rather than the more detailed purpose codes was made to preserve comparability, because the detailed codes changed between waves and the summary categories are the ones documented as equivalent in the official crosswalk.(11)Because the study estimated a small set of pre-specified primary outcomes rather than a large exploratory battery, no correction for multiple comparisons was applied. Analyses were run in Python 3.14 with pandas and numpy. The data are public and de-identified, so no ethics approval was required.

Both surveys apply validation to the travel day records before release, and the public-use files include special codes for refused, not ascertained and valid-skip responses. Missing values for age, sex and worker status were infrequent and were excluded only from the subgroup tables in which they occurred, not from the overall estimates. Trip duration was missing or not ascertained for fewer than 0.1% of trips in each year and was excluded from the travel time analyses. The annualized trip weight and the person weight had no missing values in the released files. The two surveys differ in the treatment of proxy reporting and in the minimum completion threshold for multi-member households, and these differences were accepted as part of the design comparison rather than imputed away.

The entire analysis was implemented in a single script that reads the public-use files, applies the documented purpose crosswalk and weights, and writes the metrics and tables reported here. The script was executed twice and produced identical results. The control totals reproduced from the script matched the sums of weights published in the 2022 user guide for households, persons and annualized trips, which served as an internal validation of the weighting step.(11)As a further check, the trip rate was recomputed with person weights attached to the travel day instead of annualized trip weights; the result was identical in 2017 and close in 2022, confirming that the day-of-week calibration of the NextGen trip weights does not drive the comparison.

RESULTS

Table 1 summarizes the two survey samples. Daily person-trips fell from 1,016.90 to 695.20 million. The weighted person population remained stable, at 301.60 and 305.60 million.

Table 1. Survey samples and weighted national totals, 2017 and 2022 NHTS.

Measure	2017	2022
Households, unweighted n	129696	7893
Households, weighted (millions)	118.2	127.5
Persons 5 years or older, unweighted n	264234	16997
Persons, weighted (millions)	301.6	305.6
Trips, unweighted n	923572	31074
Person-trips, annualized (billions)	371.2	253.8
Person-trips per day (millions)	1016.9	695.2

Note: Weighted totals use the official household, person and trip weights (WTHHFIN, WTPERFIN, WTTRDFIN). Annualized person-trips divided by 365 yield daily person-trips.

Daily person-trips declined while the weighted person population changed little. The fall therefore reflects fewer trips per person rather than a smaller population.

Daily person-trips per person fell from 3.37 (95% CI 3.34-3.40) to 2.28 (95% CI 2.22-2.33). The decline amounted to 32.50%. The share of persons with zero trips rose from 17.10% to 26% (Table 2).

Table 2. Trip frequency and stay-at-home behavior, 2017 and 2022.

Measure	2017	2022	p
Daily person-trips per person, mean (95% CI)	3.37 (3.34-3.40)	2.28 (2.22-2.33)	<0.001
Persons with zero trips on travel day, % (95% CI)	17.1 (16.6-17.5)	26.0 (24.9-27.1)	<0.001
Person-trips on weekends, %	29.5	29.9	0.732
Trips per person among travelers, mean	4.06	2.81	<0.001

Note: CI = confidence interval.

Trips per person among travelers declined from 4.06 to 2.81. Weekend trips were stable, at 29.50% and 29.90% of person-trips (p = 0.732).

The purpose mix shifted toward home-based travel. Not home-based trips fell from 32% to 22.20% of person-trips. Home-based work rose from 13.70% to 17.90% (Table 3).

Home-based other rose from 22.40% to 25.60% of person-trips. Home-based shopping was stable, at 20% and 20.80% (p = 0.134). Social and recreational travel rose from 12% to 13.40%.

All five purpose categories lost trips in absolute terms. Daily work trips fell from 139.10 to 124.20 million. Not home-based trips fell from 325.50 to 154.50 million.

Table 3. Person-trip purpose distribution, 2017 and 2022.

Purpose	2017 share, %	2022 share, %	p	2017 trips/day, M	2022 trips/day, M
Home-based work	13.7	17.9	<0.001	139.1	124.2
Home-based shopping	20.0	20.8	0.134	203.1	144.8
Home-based social/recreational	12.0	13.4	0.009	121.5	93.2
Home-based other	22.4	25.6	<0.001	227.6	177.8
Not home-based	32.0	22.2	<0.001	325.5	154.5

Note: Shares sum to 100% within year (excluding trips with purpose not ascertained). M = millions.

Daily travel time per person fell from 74.50 to 58.60 minutes. Mean trip duration rose from 22.10 to 25.70 minutes. Social and recreational travel was the only purpose with more travel time (Table 4).

Table 4. Travel time overall and by trip purpose, 2017 and 2022.

Measure	2017	2022	p
Mean trip duration, minutes	22.1 (21.8-22.4)	25.7 (24.5-27.0)	<0.001
Daily travel time per person, minutes	74.5 (73.6-75.5)	58.6 (55.8-61.3)	<0.001
Daily travel time for home-based work, minutes	13.1	11.3	<0.001
Daily travel time for home-based shopping, minutes	12.2	9.1	<0.001
Daily travel time for home-based social/recreational, minutes	9.6	12.6	0.001
Daily travel time for home-based other, minutes	16.0	13.6	<0.001
Daily travel time for not home-based, minutes	23.7	11.8	<0.001

Note: CI = confidence interval.

Travel time for not home-based trips fell from 23.70 to 11.80 minutes per person per day. Work travel time fell from 13.10 to 11.30 minutes. Social and recreational travel time rose from 9.60 to 12.60 minutes.

Every subgroup recorded fewer trips per person per day. Workers kept the highest rate, falling from 3.78 to 2.61 trips per person per day. Older adults fell from 3.19 to 1.99 (Table 5).

Table 5. Daily person-trips per person by sociodemographic group, 2017 and 2022.

Group	2017 trips/person/day (95% CI)	2022 trips/person/day (95% CI)	p
Age 5-17	2.79 (2.73-2.85)	1.98 (1.88-2.09)	<0.001
Age 18-34	3.30 (3.24-3.36)	2.31 (2.20-2.42)	<0.001
Age 35-64	3.73 (3.69-3.78)	2.51 (2.42-2.59)	<0.001
Age 65 or older	3.19 (3.13-3.24)	1.99 (1.88-2.10)	<0.001
Male	3.31 (3.28-3.35)	2.29 (2.22-2.36)	<0.001
Female	3.43 (3.39-3.47)	2.28 (2.21-2.36)	<0.001
Worker	3.78 (3.74-3.81)	2.61 (2.54-2.69)	<0.001
Non-worker	3.01 (2.96-3.06)	1.88 (1.79-1.96)	<0.001
Urban	3.42 (3.39-3.45)	2.28 (2.22-2.35)	<0.001
Rural	3.15 (3.08-3.23)	2.24 (2.08-2.40)	<0.001

Note: CI = confidence interval.

Rates converged slightly between men and women. Men fell from 3.31 to 2.29 and women from 3.43 to 2.28. The gap narrowed to less than one tenth of a trip.

Urban residents fell from 3.42 to 2.28 trips per person per day. Rural residents fell from 3.15 to 2.24. The urban-rural gap also narrowed.

Daily travel time also fell in every subgroup. Rural residents declined least, from 75.80 to 66 minutes. Workers fell from 86.50 to 67.30 minutes per person per day (Table 6).

Table 6. Daily travel time per person by sociodemographic group, 2017 and 2022.

Group	2017 minutes/person/day (95% CI)	2022 minutes/person/day (95% CI)	p
Age 5-17	57.7 (55.6-59.7)	49.6 (41.7-57.5)	0.053
Age 18-34	76.6 (74.5-78.8)	60.7 (55.7-65.7)	<0.001
Age 35-64	83.1 (81.9-84.3)	65.3 (60.9-69.6)	<0.001
Age 65 or older	67.9 (66.2-69.6)	49.2 (45.5-52.9)	<0.001
Male	77.8 (76.5-79.1)	61.5 (57.4-65.6)	<0.001
Female	71.4 (70.4-72.5)	55.7 (52.8-58.6)	<0.001
Worker	86.5 (85.2-87.7)	67.3 (63.9-70.7)	<0.001
Non-worker	63.9 (62.6-65.2)	48.3 (44.0-52.6)	<0.001
Urban	74.3 (73.2-75.3)	56.8 (53.7-59.9)	<0.001
Rural	75.8 (73.4-78.2)	66.0 (59.7-72.3)	0.004

Note: CI = confidence interval.

Persons aged 35 to 64 recorded the largest travel time, falling from 83.10 to 65.30 minutes. Travel time among persons 65 years or older fell from 67.90 to 49.20 minutes.

Non-workers recorded fewer trips than workers in both years. Their rate fell from 3.01 to 1.88 trips per person per day. Among age groups, persons aged 35 to 64 kept the highest trip rate.

Adults aged 18 to 34 fell from 3.30 to 2.31 trips per person per day. Adults aged 35 to 64 fell from 3.73 to 2.51. Persons aged 65 years or older fell from 3.19 to 1.99.

Children aged 5 to 17 fell from 2.79 to 1.98 trips per person per day. Daily shopping trips fell from 203.10 to 144.80 million. Daily home-based other trips fell from 227.60 to 177.80 million.

Shopping travel time fell from 12.20 to 9.10 minutes per person per day. Home-based other travel time fell from 16 to 13.60 minutes. Men traveled 77.80 minutes per day in 2017 and 61.50 in 2022.

Women traveled 71.40 minutes per day in 2017 and 55.70 in 2022. Urban travel time fell from 74.30 to 56.80 minutes. Non-worker travel time fell from 63.90 to 48.30 minutes.

Adults aged 18 to 34 traveled 76.60 minutes per day in 2017 and 60.70 in 2022. Children aged 5 to 17 traveled 57.70 and 49.60 minutes.

DISCUSSION

This study set out to quantify how person-trip frequency, trip purpose composition and daily travel time changed in the United States between 2017 and 2022. Taken together, the two national travel diaries describe a broad contraction of daily travel. People made fewer trips, more people did not travel at all on the assigned day, and less time was spent in travel, while the purpose mix moved toward home-based activities. These changes reached every demographic group and both weekdays and weekends, which indicates that the contraction was structural rather than confined to a single segment of the population.

Trip frequency fell in a way that agrees with aggregated evidence collected during the pandemic. A systematic review of COVID-19 mobility studies documented large reductions in trip making in most settings, with only partial recovery.(5)A global analysis of city mobility found that movement remained below baseline through 2022.(13)

National trip trend work indicates that per capita trip making had already weakened before the pandemic, which suggests that 2022 extends a longer trajectory rather than representing a purely pandemic artifact(2).(4)Even so, the magnitude observed here, close to one fewer trip per person per day, exceeds the year-to-year variation reported for earlier waves.(3)

The parallel decline in trips among travelers rules out the possibility that the change reflects only a growing number of stay-at-home persons. In turn, the stability of the weekend share of trips suggests that the weekday commute was not the only source of the reduction. The 2017 estimate of 3.37 daily trips per person reproduces the official figure published in the 2017 summary report, which validates the weighting and the annualization used here.(1)Estimates from New South Wales and Germany reported the same direction and a broadly similar order of magnitude, which supports the external validity of the finding(14).(15)

The placement of 2022 within a longer decline matters for interpretation. The 2017 summary already reported that seven of ten major travel indicators were lower than in 2001.(1)If per capita travel had been drifting downward for two decades, the pandemic compressed several years of change into two. The plateau was most visible among younger cohorts and among households without children(16).(4)Under this reading, the 2022 figures are not a temporary deviation but an acceleration of a pre-existing trend, with remote work and delivery acting as accelerants rather than as sole causes.

The rise in zero-trip days is the counterpart of the frequency decline and one of the most consequential findings for equity. Schedule and time-use data for 2019 to 2022 likewise show more days without out-of-home activity, concentrated among people who could work or study from home(17).(18)Staying home was not evenly distributed: older adults, women with care obligations and lower-income workers were more likely to remain at home on a given day(19).(20)

Inequality in activity participation predates the pandemic, but the pandemic widened it because the capacity to stay home was itself a resource distributed along socioeconomic lines.(21)This concentration implies that average trip rates understate the mobility loss experienced by specific groups, an issue of direct relevance for equity-oriented transport policy.(22)

Only by combining the trip rate with the stay-at-home share can a planner distinguish a population that travels less from a population that has stopped traveling altogether. The higher stay-at-home share also reduces the pool of potential transit riders, because a person who does not leave home cannot board a bus, which compounds the ridership losses that transit agencies

reported during the same period.(13)

The shift of the purpose mix toward home-based travel is consistent with the reorganization of work and daily errands. Knowledge workers moved their work to home and shed the associated commute trips.(23)Non-commuting and trip-chaining activity contracted as offices closed and households consolidated errands into fewer tours(24).(25)

Tour-based models of telework and online shopping predict exactly the observed pattern of fewer not home-based trips and a stable or higher home-based share.(8)The relative rise in the home-based work share, despite a fall in absolute work trips, reflects the resilience of jobs that could not be performed remotely.(26)The collapse of not home-based trips, which fell by roughly half, is the clearest signature of errand consolidation and chained-trip removal, since these trips link activities rather than anchor them at home.(24)

The persistence of car dependency and work-arrangement choices identified in the 2017 data suggests that the same households most exposed to errand travel were also those least able to substitute it.(27)Home-based work trips declined less in relative terms than total travel, which is consistent with the persistence of in-person work among essential and lower-wage occupations.(26) The five-category summary may also mask shifts within the home-based other category, which grew in share as medical, personal business and escort trips regrouped around the home.

Shopping trips fell in parallel with the documented substitution of e-commerce for in-store travel. Analyses of the 2017 survey already linked online shopping to fewer shopping trips.(28) Post-pandemic panels show that online purchasing retained much of its pandemic gain while in-store and food-related travel recovered only partially(29).(30)

Shopping trip trends also vary by income, which suggests that the 2022 pattern reflects differences in delivery access as much as preference.(31)Weekly travel analyses point in the same direction, with online shopping absorbing trips that would otherwise have been made in person.(32)Modeling of household online shopping demand in the United States further indicates that the substitution is durable for a substantial share of households.(33)

The near stability of the shopping share, despite the large fall in shopping trips, is consistent with a generalized reduction rather than a targeted one. The income gradient in shopping substitution also implies that lower-income households may have retained more in-person shopping trips, for which they bear a larger share of travel time relative to income.(31)

Daily travel time fell even though mean trip duration rose, a combination that points to fewer but longer trips. The lognormal form of daily travel time and its decomposition into frequency and duration components make this pattern interpretable(34).(35)Virtual mobility substitutes for time that would otherwise have been spent moving, and the rise of remote work removed the commute block of the day.(36)The rise in mean duration also reflects the loss of the shortest errand trips, precisely the trips most displaced by delivery and remote work. Social and recreational travel was the only purpose that increased its contribution to daily travel time, which is consistent with the persistence of discretionary activity amid the contraction of obligatory travel.(37)

Time-use studies during the pandemic similarly found that released commuting time was partly reallocated to home activities rather than to new travel.(18)The direction of these shifts is stable across short and long horizons, as longitudinal work on pandemic travel preferences also shows.(38)The decomposition of travel time into trip count and duration shows that the frequency effect dominated: a longer mean trip could not offset the removal of roughly one trip per person per day.

The subgroup patterns are broadly consistent with earlier NHTS-based work. Older adults reduced trip making more sharply, continuing a trend observed between 2001 and 2017(39).(4) Children and adolescents also lost trips, which aligns with the closure and later restructuring of schooling.(40) Gender gaps in travel narrowed modestly, in line with pandemic evidence on commuting and care travel(41).(42)

Generational analyses before the pandemic showed that younger cohorts were already less car-oriented, and the 2022 data do not reverse that direction.(16)Rural residents lost less travel time than urban residents, a finding that may reflect the limited telework opportunities and the persistence of essential trips in rural labor markets.(43)Workers, who retained the highest trip rate, also recorded the largest absolute reduction in travel time, which is what the removal of the commute would predict.(23)The persistence of the worker-nonworker gap in both years indicates that employment remained the strongest single correlate of daily trip making, even as the levels fell.

The effect of working from home on travel is not uniform, and this heterogeneity helps interpret the worker results. The reduction concentrates among workers with long commutes, those with dedicated home-office space, and those who telework several days rather than occasionally(44).(45)Panel evidence from Germany likewise shows that the decline concentrates among

full-day teleworkers rather than among occasional ones.(15)Telework also shifts travel across the week, with fewer trips on the days worked at home and some concentration of errands on other days.(46)

This day-of-week redistribution is consistent with the stable weekend share observed here. The interaction between telework choice and commute distance,(44)together with the treatment-effect estimates of teleworking on vehicle miles,(45)suggests that the 2022 trip rate reflects a new distribution of work arrangements more than a uniform reduction in the desire to travel. Because the ability to telework is concentrated among higher-educated and higher-income workers, the travel reductions it produces are also concentrated, which again points to equity as the central concern of the post-pandemic travel system.

This comparison has the strength of using two nationally representative travel diaries with consistent trip definitions and an officially documented purpose crosswalk.(11)Its main limitation is the change in survey design between waves: the 2022 NextGen sample is smaller, was fielded over thirteen months with a one-stage protocol, and applies a different weighting and annualization scheme.(12)Response willingness also varies across NHTS waves and could affect the level, if not the direction, of the estimates.(47)

A second limitation is the absence of replicate weights in the NextGen release, which prevented variance estimation that fully accounts for the sampling design; the household-level linearization used here is a standard approximation but may understate design effects.(11)A third limitation is that the 2017 and 2022 weights use different calibration targets, so comparisons of levels, though not of directions, should be read with some caution.(12)

A fourth limitation is that 2022 still fell within the pandemic period, so the figures describe a transition rather than a new steady state; future waves of the continuous NextGen survey will show which changes persist.(26)

The cross-sectional design also prevents attributing the changes to any single policy or behavior, because remote work, delivery and disease-control measures operated simultaneously. The results describe the civilian noninstitutionalized population aged 5 years and older and do not cover group quarters, which the survey excludes by design.(11)The study reports population means and does not model individual determinants, so the causal contribution of telework, delivery and policy cannot be separated within these data.

For practice, the results imply that trip-based planning models calibrated on pre-pandemic data will overstate travel demand and should be updated with purpose-specific and group-specific rates. The higher stay-at-home share changes the denominator of exposure for safety and equity analyses. The shift toward fewer, longer trips also alters the profile of congestion, emissions and infrastructure use that planners should expect. Continuous monitoring with the NextGen survey will be needed to determine which of these changes are permanent and which will reverse as the pandemic recedes.(26)

The comparison also points to specific gaps for future work. The continuous NextGen survey will eventually support monthly and seasonal analysis of trip rates, which the two cross-sections used here cannot. Linking the travel diary to work-arrangement and online-shopping questions would allow the purpose shifts to be attributed to specific behaviors.

Replicating the analysis with the detailed purpose codes, once the longitudinal series stabilizes, would test whether the five-category summary conceals changes within categories. State and metropolitan add-on samples would further support subnational estimates for planning agencies that need locally calibrated rates.

The findings also carry implications for service planning. Fixed-route transit depends on a steady pool of daily travelers, and a lower trip rate reduces that pool even before mode choice is considered. Social services and health care providers that schedule around patient and client travel should expect fewer but longer trips, with demand concentrated on the days that people do travel. For congestion management, the shift toward fewer and longer trips suggests that peak spreading may matter less than the total volume removed by remote work.

CONCLUSIONS

Between 2017 and 2022, person-trip frequency declined in the United States and the share of persons making no trips on the travel day increased. The purpose composition of daily travel shifted away from not home-based trips toward home-based purposes. Daily travel time decreased while mean trip duration increased. These changes occurred across age, sex, worker status and residence groups, with the sharpest reductions among workers and older adults.

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FUNDING

No financing

CONFLICT OF INTEREST

None

AUTHORSHIP CONTRIBUTIONS

Drafting – original draft: Rómulo Esteban Montilla, Edixon Chacón Guerrero.
Writing–review and editing: Rómulo Esteban Montilla, Edixon Chacón Guerrero.