Modeled estimates (with standard errors) of the percent distribution of personal telephone status for adults aged 18 and over, by state: United States, 2020

Geographic area	Wireless-only adults	Wireless-mostly adults	Dual users	Landline-mostly adults	Landline-only adults	Phoneless adults	Total
Alabama	68.3 (2.4)	14.9 (2.1)	6.5 (1.1)	4.7 (0.7)	4.4 (0.8)	1.1	100.0
Alaska	67.9 (2.3)	17.6 (2.2)	7.0 (1.3)	3.1 (0.6)	3.5 (0.8)	1.0	100.0
Arizona	71.9 (2.1)	15.2 (1.9)	5.6 (1.3)	3.5 (0.6)	2.7 (0.5)	1.0	100.0
Arkansas	69.9 (2.8)	14.7 (2.0)	4.7 (1.2)	6.1 (1.0)	3.5 (0.9)	1.0	100.0
California	64.2 (1.4)	19.0 (1.2)	8.9 (0.8)	4.4 (0.3)	2.7 (0.4)	0.7	100.0
Colorado	71.6 (2.2)	12.5 (1.4)	7.7 (1.3)	4.6 (0.6)	3.1 (0.6)	0.6	100.0
Connecticut	51.7 (2.6)	26.7 (2.7)	10.3 (1.4)	5.6 (0.7)	5.2 (0.8)	0.6	100.0
Delaware	53.5 (2.5)	24.8 (2.8)	12.2 (1.9)	6.3 (0.8)	2.7 (0.7)	0.4	100.0
District of Columbia	63.7 (3.1)	17.9 (3.1)	10.9 (2.1)	4.4 (0.8)	2.5 (0.8)	0.6	100.0
Florida	65.6 (1.5)	18.3 (1.5)	8.0 (1.0)	3.9 (0.3)	3.2 (0.4)	1.0	100.0
Georgia	66.0 (1.8)	18.2 (1.7)	9.0 (1.3)	3.6 (0.4)	2.5 (0.5)	0.8	100.0
Hawaii	54.2 (2.7)	22.9 (3.0)	14.7 (2.2)	4.3 (0.8)	3.4 (0.9)	0.7	100.0
Idaho	78.6 (2.8)	8.8 (1.7)	5.3 (1.2)	3.9 (0.7)	2.8 (0.8)	0.7	100.0
Illinois	66.2 (1.8)	18.1 (1.7)	8.3 (1.0)	4.5 (0.4)	2.1 (0.4)	0.8	100.0
Indiana	69.1 (2.3)	12.6 (1.9)	8.9 (1.4)	4.9 (0.6)	3.4 (0.7)	1.0	100.0
Iowa	70.2 (2.7)	12.5 (1.8)	7.5 (1.5)	5.3 (0.7)	3.7 (0.8)	0.8	100.0
Kansas	69.8 (2.3)	13.8 (1.8)	8.2 (1.7)	4.3 (0.8)	3.1 (0.6)	0.8	100.0
Kentucky	67.9 (2.5)	10.4 (1.6)	8.3 (1.5)	7.5 (0.9)	4.9 (0.9)	1.1	100.0
Louisiana	69.3 (2.2)	16.1 (2.2)	6.2 (1.4)	3.5 (0.7)	3.9 (0.8)	1.0	100.0
Maine	55.2 (3.8)	14.0 (2.3)	13.0 (2.4)	10.4 (1.5)	6.2 (1.1)	1.2	100.0
Maryland	48.5 (2.4)	26.0 (2.4)	14.6 (1.6)	7.0 (0.8)	3.2 (0.7)	0.7	100.0
Massachusetts	47.2 (2.1)	27.4 (2.2)	14.6 (1.6)	6.0 (0.5)	4.1 (0.7)	0.7	100.0
Michigan	63.7 (2.1)	14.7 (1.6)	10.0 (1.4)	7.0 (0.7)	4.0 (0.6)	0.6	100.0
Minnesota	63.8 (2.0)	17.1 (2.0)	8.4 (1.1)	5.7 (0.6)	4.5 (0.8)	0.5	100.0
Mississippi	75.5 (2.7)	11.3 (2.1)	6.0 (1.4)	3.6 (0.6)	2.3 (0.6)	1.2	100.0
Missouri	69.8 (1.9)	12.6 (1.7)	9.0 (1.4)	4.7 (0.6)	2.9 (0.6)	0.9	100.0
Montana	64.6 (3.2)	13.6 (2.2)	8.6 (1.8)	7.6 (1.0)	4.5 (1.0)	1.1	100.0
Nebraska	67.8 (2.6)	18.3 (2.4)	7.1 (1.4)	3.7 (0.6)	2.4 (0.6)	0.6	100.0
Nevada	73.4 (2.3)	15.6 (2.3)	5.9 (1.2)	1.6 (0.4)	2.4 (0.6)	1.0	100.0
New Hampshire	49.9 (2.4)	22.5 (2.8)	13.9 (2.1)	9.1 (1.3)	4.0 (0.8)	0.6	100.0
New Jersey	48.8 (2.1)	25.8 (2.2)	13.9 (1.7)	6.4 (0.6)	4.4 (0.7)	0.7	100.0
New Mexico	76.5 (2.7)	12.1 (2.0)	4.8 (1.3)	2.4 (0.6)	3.0 (0.9)	1.2	100.0
New York	46.7 (1.4)	23.6 (1.4)	15.6 (1.1)	6.9 (0.4)	6.1 (0.6)	0.9	100.0
North Carolina	64.7 (1.8)	16.7 (1.9)	8.9 (1.2)	5.2 (0.5)	3.8 (0.7)	0.8	100.0
North Dakota	58.2 (3.5)	17.5 (2.8)	16.4 (2.4)	4.3 (1.0)	3.1 (0.7)	0.5	100.0
Ohio	65.6 (1.9)	14.4 (1.7)	8.3 (1.2)	7.1 (0.6)	3.7 (0.6)	0.8	100.0
Oklahoma	77.5 (2.3)	11.5 (2.0)	4.9 (1.0)	2.8 (0.5)	2.6 (0.7)	0.7	100.0
Oregon	66.6 (2.4)	16.6 (2.2)	6.8 (1.2)	5.5 (0.8)	3.9 (0.8)	0.6	100.0
Pennsylvania	51.4 (1.7)	20.5 (1.7)	13.1 (1.4)	9.7 (0.6)	4.5 (0.6)	0.9	100.0
Rhode Island	53.9 (3.0)	21.7 (2.7)	10.6 (1.9)	8.6 (1.0)	4.7 (0.9)	0.6	100.0
South Carolina	61.9 (2.5)	16.1 (2.2)	9.2 (1.5)	7.7 (0.9)	4.2 (0.8)	0.9	100.0
South Dakota	71.7 (2.9)	13.8 (1.9)	7.4 (1.6)	1.9 (0.5)	3.9 (0.9)	1.3	100.0
Tennessee	68.0 (1.9)	13.6 (1.7)	8.3 (1.2)	6.1 (0.5)	2.9 (0.6)	1.1	100.0
Texas	71.5 (1.3)	16.9 (1.3)	5.8 (0.7)	2.7 (0.3)	2.3 (0.4)	0.8	100.0
Utah	72.8 (2.4)	15.1 (1.9)	8.2 (1.4)	1.4 (0.4)	1.9 (0.6)	0.6	100.0
Vermont	51.0 (2.5)	17.1 (2.6)	9.9 (1.6)	11.6 (1.2)	9.3 (1.5)	1.1	100.0
Virginia	56.4 (1.9)	20.5 (1.7)	10.4 (1.2)	7.7 (0.6)	4.4 (0.7)	0.6	100.0
Washington	65.0 (1.8)	17.5 (2.0)	10.4 (1.4)	4.1 (0.5)	2.3 (0.5)	0.7	100.0
West Virginia	63.4 (3.2)	13.3 (2.2)	8.0 (1.8)	9.5 (1.3)	4.4 (1.0)	1.3	100.0
Wisconsin	62.2 (2.2)	15.5 (1.9)	9.2 (1.0)	8.2 (0.7)	4.2 (0.7)	0.8	100.0
Wyoming	77.2 (2.3)	12.4 (2.1)	4.4 (1.4)	3.5 (0.8)	2.0 (0.6)	0.6	100.0

See notes on next page.

NOTES: Small-area statistical modeling techniques were used to combine National Health Interview Survey (NHIS) data collected from within specific geographies (states and some counties) with auxiliary data that are representative of those geographies to produce model-based estimates. Estimates for the 50 states and the District of Columbia were modeled using the procedures described in previous National Health Statistics Reports (e.g., http://www.cdc.gov/nchs/data/nhsr/nhsr039.pdf), with a few modifications.

• Models were based on three 12-month periods (2018-2020).

• LASSO regression models (least absolute shrinkage and selection operator) were used to select the best set of covariates for the models.

• Potential covariates originally drawn from infoUSA.com were dropped in favor of additional covariates from the American Community Survey (ACS) on internet and smartphone use.

• Due to the impact of the COVID-19 pandemic on data collection, the Census Bureau did not release 1-year estimates for the 2020 American Community Survey. Therefore, ACS data from 2017-2019 were used as covariates. Data from the 2017 ACS were used as covariates in the model for direct estimates derived using data from the 2018 NHIS, 2018 ACS data were used in the model for 2019 NHIS data, and 2019 ACS data were used in the model for 2020 NHIS data.

• The proportion of adults living in households with no telephone service ("phoneless adults") was not modeled. Other proportions were adjusted so that this estimate agreed with the 2019 ACS estimate for this proportion. 2020 ACS estimates for this proportion are not available due to the impact of the COVID-19 pandemic on ACS data collection.

• The variances for the direct estimates were computed using in-house rather than publicly available sample design variables.

In 2019, the NHIS underwent a questionnaire redesign to better meet the needs of data users. The redesigned NHIS classifies telephone status for adults rather than households. The modeled estimates reported here for 2020 are for adults aged 18 and over who are wireless-only, wireless-mostly, dual users, landline-mostly, and landline-only instead of adults aged 18 and over *living in households* that are wireless-only, wireless-mostly, dual-use, landline-mostly, or landline-only. The direct estimates used in the models for 2019 and 2020 follow the person-level classification of telephone status. However, the direct estimates used in the models for 2018 follow the previous household-level classification of telephone status.

Caution is warranted when interpreting telephone status estimates from 2020. Due to the COVID-19 pandemic, NHIS data collection switched to a telephone-only mode beginning March 19, 2020. This change had little impact on Quarter 1 of 2020 (January–March), but there were lower response rates and differences in respondent characteristics for Quarters 2, 3, and 4 of 2020 (April–December). Telephone-only data collection led to an over-representation of more affluent households, including a greater proportion of homeowners, among the participating sample in Quarter 2. Personal visits to households resumed in selected areas in July 2020 and in all areas of the country in September 2020. However, cases were still attempted by telephone first and a majority were completed by telephone.

Survey weights were adjusted to account for changes in respondent characteristics due to overall changes in the 2020 data collection. However, phoneless households (i.e., those with neither wireless nor landline telephones) generally could not be interviewed in Quarter 2. Caution should be used in interpreting differences observed in estimates between 2020 and earlier time periods.

Additionally, due to concerns about possible loss of coverage and lower response rates typically associated with telephone interviewing, approximately half of the original sample allocated for the last five months of 2020 was replaced with adults who completed the 2019 NHIS interview. Estimates in this table do not include 2020 data from the reinterviewed sample. The overall sample size for 2020 is therefore smaller than for previous years.

Small-area statistical modeling assumes that the design-based estimates of variance are stable and that the direct estimates are unbiased. Users are cautioned that the approach used to create the model-based estimates can produce substantially biased prevalence estimates and unstable variance estimates when the direct estimate from NHIS is based on small sample sizes, when that sample is drawn from only a few geographic areas, and when those few geographic areas are not representative of the state of interest.

SOURCES: NCHS, National Health Interview Survey, 2018–2020; and U.S. Census Bureau, American Community Survey, 2017–2019.

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