



# National Health Interview Survey Early Release Program

**Table 1. Modeled estimates (with standard errors) of the percent distribution of household telephone status for adults aged 18 and over, by state: United States, 2018**

Geographic area	Wireless-only	Wireless-mostly	Dual-use	Landline-mostly	Landline-only	No telephone service	Total
Alabama	57.6 (2.4)	14.6 (1.5)	12.0 (1.3)	6.4 (1.0)	5.8 (0.8)	3.6	100.0
Alaska	57.3 (1.9)	19.0 (1.9)	14.4 (1.6)	3.4 (0.8)	3.0 (0.6)	3.0	100.0
Arizona	64.9 (2.1)	12.7 (1.3)	10.2 (1.0)	5.2 (0.9)	3.3 (0.6)	3.7	100.0
Arkansas	66.4 (2.6)	10.7 (1.5)	8.7 (1.1)	6.0 (1.0)	4.2 (0.8)	4.0	100.0
California	55.4 (1.2)	20.1 (0.9)	13.3 (0.7)	5.3 (0.4)	3.3 (0.3)	2.5	100.0
Colorado	61.4 (2.1)	16.3 (1.5)	11.6 (1.0)	4.7 (0.8)	3.0 (0.5)	3.0	100.0
Connecticut	40.8 (2.2)	22.7 (1.9)	20.2 (1.6)	7.5 (1.0)	6.6 (1.0)	2.1	100.0
Delaware	45.9 (2.7)	19.9 (2.0)	21.0 (1.7)	7.6 (1.1)	4.0 (0.8)	1.6	100.0
District of Columbia	57.4 (2.8)	19.7 (2.2)	14.0 (1.5)	2.9 (0.7)	3.3 (0.8)	2.6	100.0
Florida	60.9 (1.4)	15.9 (1.0)	11.0 (0.7)	4.4 (0.5)	4.0 (0.5)	3.7	100.0
Georgia	59.0 (1.5)	17.9 (1.2)	12.1 (1.0)	4.5 (0.6)	3.5 (0.5)	3.1	100.0
Hawaii	51.6 (2.3)	16.6 (1.9)	20.6 (1.8)	4.8 (0.8)	3.2 (0.7)	3.2	100.0
Idaho	72.2 (2.7)	9.2 (1.2)	7.8 (1.2)	4.7 (1.0)	3.1 (0.6)	3.0	100.0
Illinois	59.8 (1.6)	15.0 (1.1)	13.6 (0.9)	5.6 (0.7)	3.0 (0.5)	3.0	100.0
Indiana	63.3 (1.8)	13.0 (1.4)	9.6 (0.8)	6.4 (0.8)	4.0 (0.6)	3.7	100.0
Iowa	61.3 (2.6)	13.6 (1.5)	11.0 (1.0)	6.9 (0.9)	3.8 (0.7)	3.4	100.0
Kansas	64.6 (2.3)	13.3 (1.7)	11.2 (1.3)	4.6 (0.9)	3.4 (0.7)	2.9	100.0
Kentucky	61.9 (2.4)	11.8 (1.2)	9.8 (1.0)	7.3 (1.0)	5.7 (0.9)	3.4	100.0
Louisiana	57.6 (2.0)	17.9 (1.5)	12.0 (1.2)	5.0 (0.9)	4.2 (0.7)	3.3	100.0
Maine	47.7 (2.9)	15.1 (1.7)	14.5 (1.4)	13.3 (1.7)	6.7 (1.0)	2.7	100.0
Maryland	39.4 (2.2)	28.0 (2.0)	19.4 (1.4)	7.3 (0.8)	3.0 (0.6)	2.9	100.0
Massachusetts	39.9 (1.9)	21.9 (1.6)	21.8 (1.4)	7.6 (1.0)	6.5 (0.8)	2.3	100.0
Michigan	57.3 (2.0)	14.3 (1.1)	12.1 (1.0)	8.3 (0.9)	4.7 (0.6)	3.3	100.0
Minnesota	56.2 (2.1)	16.0 (1.4)	12.9 (1.0)	7.6 (0.8)	4.4 (0.7)	2.9	100.0
Mississippi	66.5 (2.7)	14.1 (1.7)	8.1 (1.1)	4.0 (0.8)	3.9 (0.8)	3.4	100.0
Missouri	64.2 (2.2)	12.5 (1.2)	11.0 (1.1)	5.8 (0.7)	3.2 (0.5)	3.2	100.0
Montana	51.9 (2.9)	13.3 (1.6)	15.0 (1.6)	9.3 (1.4)	6.3 (1.1)	4.2	100.0
Nebraska	58.7 (2.4)	15.1 (1.8)	13.3 (1.3)	5.8 (1.1)	4.2 (0.9)	2.9	100.0
Nevada	62.7 (2.6)	15.4 (1.6)	11.5 (1.3)	2.8 (0.7)	4.0 (0.7)	3.7	100.0
New Hampshire	46.0 (1.9)	17.9 (1.7)	18.8 (1.7)	10.4 (1.4)	4.5 (0.9)	2.5	100.0
New Jersey	38.1 (1.8)	27.6 (1.7)	20.2 (1.3)	7.0 (0.9)	4.9 (0.7)	2.1	100.0
New Mexico	66.4 (2.3)	9.7 (1.4)	10.0 (1.1)	4.2 (0.8)	4.1 (0.7)	5.5	100.0
New York	38.8 (1.3)	21.8 (1.0)	22.4 (1.0)	7.7 (0.6)	6.0 (0.5)	3.2	100.0
North Carolina	57.3 (1.6)	15.8 (1.2)	12.9 (1.0)	6.5 (0.8)	4.5 (0.6)	2.9	100.0
North Dakota	58.4 (3.0)	17.1 (2.1)	13.2 (1.6)	4.9 (1.0)	3.4 (0.7)	3.0	100.0
Ohio	58.5 (1.6)	12.7 (0.9)	13.4 (0.9)	8.1 (0.8)	4.3 (0.6)	3.0	100.0
Oklahoma	66.7 (2.0)	12.4 (1.5)	9.9 (1.1)	3.7 (0.7)	3.6 (0.7)	3.7	100.0
Oregon	63.4 (2.3)	12.6 (1.4)	9.7 (1.0)	6.5 (0.9)	5.6 (0.9)	2.2	100.0
Pennsylvania	43.4 (1.4)	17.7 (1.1)	21.1 (1.1)	10.5 (0.9)	4.3 (0.5)	3.0	100.0
Rhode Island	45.6 (2.8)	18.4 (1.9)	18.4 (1.6)	9.7 (1.3)	5.6 (0.9)	2.3	100.0
South Carolina	55.7 (2.1)	15.1 (1.4)	13.3 (1.2)	8.0 (1.1)	4.9 (0.7)	3.0	100.0
South Dakota	60.9 (2.9)	15.3 (1.9)	10.9 (1.4)	4.5 (0.9)	3.9 (0.7)	4.3	100.0
Tennessee	61.2 (2.0)	15.7 (1.4)	9.6 (0.9)	6.8 (0.8)	3.7 (0.6)	3.0	100.0
Texas	67.9 (1.2)	15.1 (0.9)	7.5 (0.6)	3.7 (0.4)	2.5 (0.3)	3.3	100.0
Utah	69.0 (2.5)	13.6 (1.5)	10.4 (1.2)	2.0 (0.6)	2.6 (0.6)	2.4	100.0
Vermont	48.0 (2.6)	11.3 (1.4)	10.3 (1.4)	13.2 (1.6)	12.1 (1.6)	5.0	100.0
Virginia	49.1 (1.9)	20.7 (1.5)	15.0 (1.1)	8.1 (0.9)	4.9 (0.6)	2.2	100.0
Washington	58.2 (1.7)	16.4 (1.3)	12.4 (1.1)	5.4 (0.7)	5.0 (0.8)	2.6	100.0
West Virginia	52.6 (2.9)	13.1 (1.8)	13.2 (1.4)	12.1 (1.5)	5.7 (1.0)	3.3	100.0
Wisconsin	54.0 (1.9)	14.8 (1.4)	14.1 (1.2)	9.2 (0.9)	4.1 (0.6)	3.8	100.0
Wyoming	69.5 (2.0)	8.5 (1.1)	12.4 (1.4)	4.3 (0.8)	3.2 (0.7)	2.1	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 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 five 12-month periods (2014-2018); LASSO regression models (least absolute shrinkage and selection operator) were used to select the best set of covariates for the models; covariates for these adult models were allowed to differ from the covariates for models based on children; 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; the variances for the direct estimates were computed using in-house rather than publicly available sample design variables; and the reported standard errors were based on the variance of the estimate prior to benchmarking to national NHIS estimates for the corresponding phone category and modified state-level ACS estimates for the population without telephone service.

The proportion of adults living in households with no telephone service was not modeled. Other proportions were adjusted so that this estimate agreed with a modified 2018 ACS estimate for this proportion. Beginning in 2017, the Census Bureau changed the way their ACS telephone service data are edited, resulting in a decrease in housing units with no telephone service. For the estimates reported here, the state-level ACS estimates were modified so that a national estimate derived from those modified state estimates would match the corresponding NHIS estimate for 2018. The state-level estimates reported here for the proportion of adults living in households with no telephone service will not match similar estimates reported by the Census Bureau.

Small-area statistical modeling assumes that the design-based estimates of variance are stable and that the direct estimates are unbiased. Users are therefore 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, 2014–2018; and U.S. Census Bureau, American Community Survey, 2013–2018.

ACKNOWLEDGMENTS: Estimates were calculated by Nadarajasundaram Ganesh of NORC at the University of Chicago, in collaboration with Lin Liu of NORC and with staff of the National Center for Health Statistics, Division of Health Interview Statistics and Division of Research and Methodology.



## National Health Interview Survey Early Release Program

**Table 2. Modeled estimates (with standard errors) of the percent distribution of household telephone status for children under age 18, by state: United States, 2018**

Geographic area	Wireless-only	Wireless-mostly	Dual-use	Landline-mostly	Landline-only	No telephone service	Total
Alabama	71.6 (3.2)	14.9 (2.7)	5.3 (1.6)	2.5 (1.1)	2.0 (0.8)	3.8	100.0
Alaska	67.5 (2.7)	20.0 (3.5)	6.3 (2.0)	0.9 (0.7)	0.8 (0.5)	4.5	100.0
Arizona	75.7 (2.8)	13.5 (2.3)	4.8 (1.4)	1.0 (0.5)	1.2 (0.6)	3.8	100.0
Arkansas	81.2 (2.7)	9.8 (2.0)	3.7 (1.3)	0.6 (0.5)	1.7 (0.8)	3.1	100.0
California	63.5 (1.7)	21.6 (1.5)	8.5 (1.0)	2.3 (0.5)	1.8 (0.5)	2.3	100.0
Colorado	67.9 (2.9)	20.6 (2.6)	7.8 (1.5)	1.2 (0.6)	0.6 (0.4)	1.9	100.0
Connecticut	50.6 (3.5)	27.1 (3.4)	14.7 (2.7)	3.6 (1.2)	2.3 (0.9)	1.7	100.0
Delaware	55.9 (3.9)	26.4 (3.6)	12.7 (2.5)	2.4 (1.1)	1.0 (0.6)	1.7	100.0
District of Columbia	52.9 (4.5)	28.4 (4.1)	11.2 (2.9)	0.9 (0.8)	1.5 (0.9)	5.1	100.0
Florida	72.9 (2.1)	14.7 (1.8)	5.6 (1.1)	1.0 (0.4)	1.7 (0.5)	4.1	100.0
Georgia	69.2 (2.6)	19.0 (2.2)	6.0 (1.3)	0.6 (0.4)	2.7 (0.8)	2.5	100.0
Hawaii	62.2 (2.8)	19.2 (3.0)	12.4 (2.7)	1.4 (0.9)	0.3 (0.3)	4.4	100.0
Idaho	81.8 (3.1)	8.6 (2.1)	6.3 (2.1)	0.3 (0.4)	0.7 (0.5)	2.2	100.0
Illinois	68.9 (2.3)	17.7 (1.9)	8.5 (1.4)	1.3 (0.6)	0.5 (0.3)	3.0	100.0
Indiana	75.4 (2.5)	10.7 (1.9)	4.7 (1.4)	1.4 (0.7)	2.4 (0.9)	5.3	100.0
Iowa	73.1 (3.3)	14.9 (2.5)	6.7 (1.7)	1.2 (0.6)	1.6 (0.8)	2.6	100.0
Kansas	77.2 (3.0)	14.7 (2.8)	*	1.7 (1.0)	0.7 (0.5)	2.3	100.0
Kentucky	70.6 (3.3)	12.9 (2.4)	6.6 (1.8)	3.1 (1.1)	2.9 (1.0)	4.0	100.0
Louisiana	67.8 (3.1)	18.1 (2.7)	7.1 (1.9)	1.7 (0.9)	2.7 (1.0)	2.5	100.0
Maine	63.1 (4.5)	18.8 (3.3)	7.2 (1.9)	*	*	2.2	100.0
Maryland	49.1 (3.7)	31.6 (3.4)	13.9 (2.5)	1.5 (0.7)	0.8 (0.5)	3.1	100.0
Massachusetts	43.7 (3.1)	27.6 (2.8)	19.4 (2.5)	2.9 (1.0)	4.0 (1.0)	2.4	100.0
Michigan	69.5 (2.6)	15.5 (2.2)	7.1 (1.6)	2.1 (0.8)	1.7 (0.7)	4.2	100.0
Minnesota	63.2 (3.2)	20.1 (2.9)	10.2 (2.3)	1.9 (0.9)	1.9 (0.7)	2.6	100.0
Mississippi	80.9 (2.7)	11.3 (2.4)	*	1.0 (0.7)	0.6 (0.5)	3.0	100.0
Missouri	74.9 (2.5)	12.1 (1.8)	5.6 (1.6)	0.9 (0.5)	2.5 (0.8)	4.1	100.0
Montana	62.0 (3.8)	17.8 (3.2)	11.0 (2.5)	2.5 (1.1)	2.4 (1.0)	4.3	100.0
Nebraska	71.1 (3.0)	17.8 (2.6)	6.5 (1.6)	1.5 (0.9)	1.8 (0.8)	1.3	100.0
Nevada	72.1 (3.6)	15.2 (2.7)	6.2 (1.8)	0.7 (0.6)	2.1 (0.9)	3.7	100.0
New Hampshire	53.8 (4.3)	23.4 (3.6)	14.5 (2.5)	*	1.2 (0.7)	3.1	100.0
New Jersey	41.5 (2.8)	31.8 (2.9)	16.9 (2.4)	4.4 (1.3)	3.2 (0.9)	2.2	100.0
New Mexico	81.5 (2.6)	4.3 (1.4)	6.6 (1.8)	0.8 (0.6)	1.0 (0.6)	6.0	100.0
New York	45.9 (2.1)	24.9 (1.9)	19.0 (1.8)	2.8 (0.6)	2.9 (0.6)	4.5	100.0
North Carolina	69.0 (2.5)	16.0 (2.0)	8.1 (1.5)	1.6 (0.7)	2.6 (0.7)	2.6	100.0
North Dakota	64.7 (4.1)	21.1 (3.5)	8.5 (2.5)	2.2 (1.2)	0.8 (0.6)	2.5	100.0
Ohio	71.8 (2.3)	11.7 (1.6)	8.2 (1.5)	1.3 (0.6)	2.0 (0.6)	5.0	100.0
Oklahoma	75.7 (2.6)	10.9 (2.2)	8.1 (2.0)	0.2 (0.3)	1.2 (0.7)	3.8	100.0
Oregon	73.6 (3.5)	15.3 (2.6)	5.9 (1.8)	1.0 (0.6)	2.1 (0.9)	2.1	100.0
Pennsylvania	52.5 (2.5)	21.6 (2.2)	14.5 (2.0)	3.7 (0.9)	2.3 (0.7)	5.4	100.0
Rhode Island	60.1 (4.0)	21.3 (3.4)	12.2 (2.8)	2.4 (1.2)	1.3 (0.7)	2.7	100.0
South Carolina	67.2 (2.8)	16.7 (2.6)	9.1 (2.0)	2.1 (0.9)	1.9 (0.8)	3.0	100.0
South Dakota	69.8 (3.5)	17.0 (2.6)	*	0.1 (0.3)	2.2 (1.0)	6.3	100.0
Tennessee	71.4 (2.8)	16.6 (2.3)	5.5 (1.3)	1.7 (0.7)	1.6 (0.6)	3.1	100.0
Texas	76.6 (1.6)	14.1 (1.3)	3.5 (0.7)	1.2 (0.4)	1.4 (0.4)	3.1	100.0
Utah	71.1 (3.1)	16.1 (2.5)	10.1 (2.1)	0.1 (0.1)	1.6 (0.6)	1.1	100.0
Vermont	59.4 (3.4)	12.7 (2.3)	6.1 (1.8)	12.4 (2.4)	6.1 (1.6)	3.3	100.0
Virginia	62.3 (2.7)	22.1 (2.5)	9.9 (1.7)	1.8 (0.6)	2.3 (0.8)	1.6	100.0
Washington	66.6 (2.6)	18.7 (2.3)	8.9 (1.8)	1.2 (0.5)	2.3 (0.7)	2.3	100.0
West Virginia	66.7 (4.0)	14.3 (2.7)	7.0 (2.0)	6.8 (2.1)	1.4 (0.8)	3.8	100.0
Wisconsin	60.4 (3.0)	17.8 (2.6)	10.4 (1.7)	4.3 (1.2)	2.0 (0.8)	5.2	100.0
Wyoming	78.6 (2.9)	10.3 (2.0)	6.2 (1.6)	1.0 (0.6)	1.2 (0.6)	2.7	100.0

\* Estimate does not meet NCHS standards of reliability as specified in *National Center for Health Statistics Data Presentation Standards for Proportions* (available from: [https://www.cdc.gov/nchs/data/series/sr\\_02/sr02\\_175.pdf](https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf)).

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The proportion of children living in households with no telephone service was not modeled. Other proportions were adjusted so that this estimate agreed with a modified 2018 ACS estimate for this proportion. Beginning in 2017, the Census Bureau changed the way their ACS telephone service data are edited, resulting in a decrease in housing units with no telephone service. For the estimates reported here, the state-level ACS estimates were modified so that a national estimate derived from those modified state estimates would match the corresponding NHIS estimate for 2018. The state-level estimates reported here for the proportion of children living in households with no telephone service will not match similar estimates reported by the Census Bureau.

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