

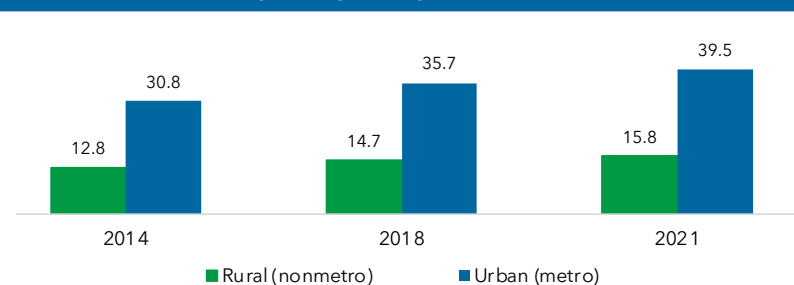
# Changes in the Supply and Rural-Urban Distribution of Psychologists in the U.S., 2014-2021

## KEY FINDINGS

- The number of psychologists per 100,000 population in rural U.S. counties (15.8) was less than half that of urban counties (39.5).
- The ratio of psychologists to population increased in both rural and urban counties from 2014 to 2021, but the increase has been larger in urban counties (23.4% vs. 28.2%).
- The 2021 supply of psychologists per 100,000 population varied substantially across different types of rural places. Rural counties adjacent to metro counties had a ratio of 14.8, and small and remote counties adjacent to micro counties had a ratio of 9.6. These ratios were lower than those of nonadjacent micropolitan (21.7) and nonadjacent small and remote (16.9) counties.
- Nearly half (45.3%) of rural counties did not have a psychologist in 2021 compared to 15.7% of urban counties.

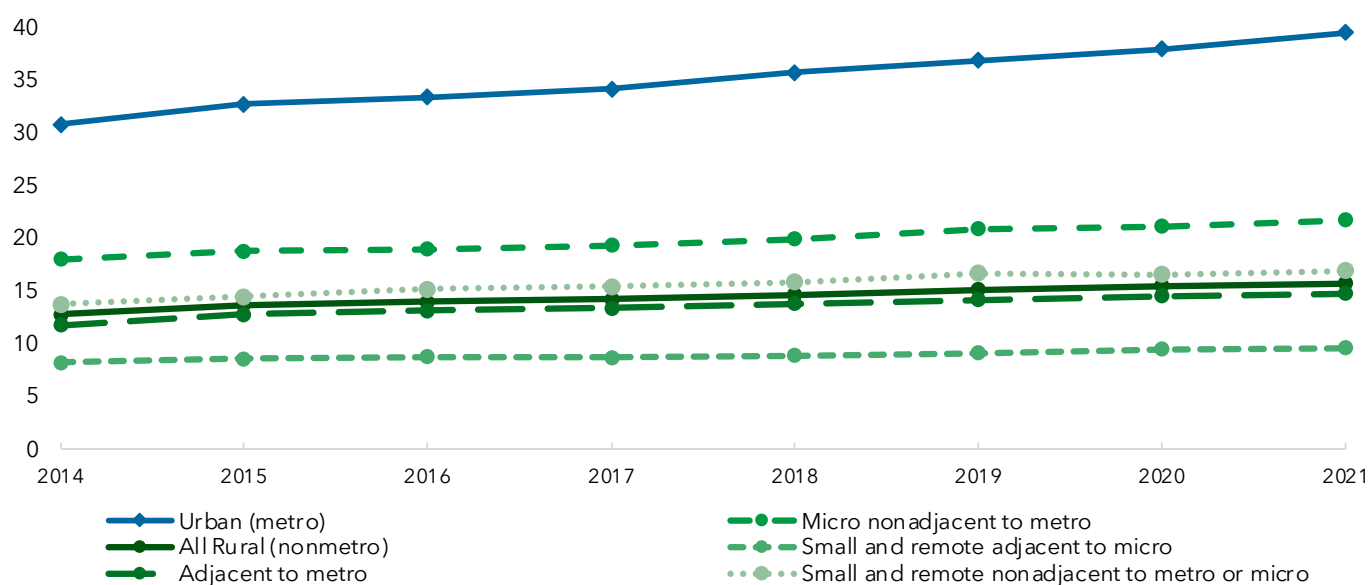
This report describes the rural-urban distribution of psychologists in U.S. counties from 2014 to 2021. The following types of psychologists were included: psychologist, addiction (substance use disorder), adult development and aging, clinical, clinical child and adolescent, cognitive and behavioral, counseling, educational, family, group psychotherapy, health, health service, intellectual and developmental disabilities, prescribing (medical), psychoanalysis, psychotherapy, rehabilitation, school, and women. Counties were categorized using the U.S. Department of Agriculture Urban Influence Codes (UIC). For detailed county designations, see page 4.

**Figure 1. Psychologists per 100,000 Population in U.S. Rural and Urban Counties, 2014, 2018, and 2021**



Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021.

**Figure 2. Psychologists per 100,000 Population in U.S. Rural and Urban Counties, 2014-2021**



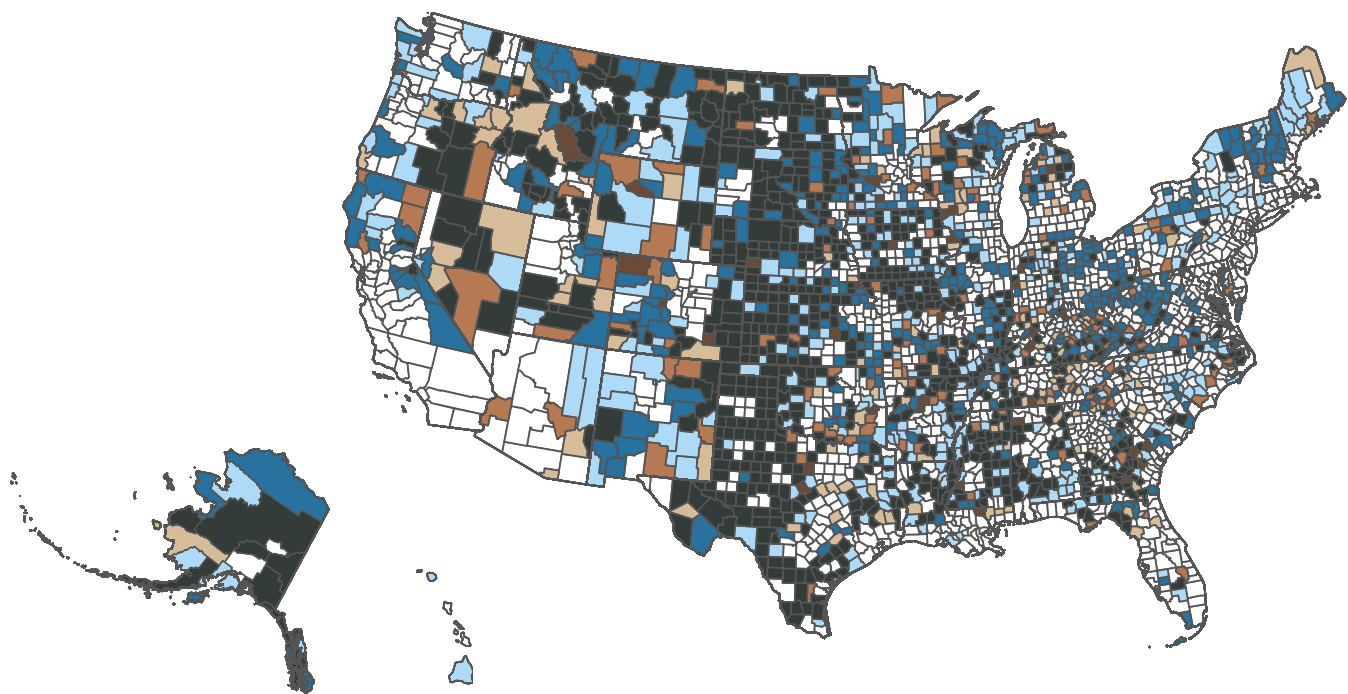
Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021.

**Table 1. Psychologists per 100,000 Population in U.S. Rural and Urban Counties, 2014-2021**

	2014	2015	2016	2017	2018	2019	2020	2021
Urban (metro)	30.8	32.7	33.4	34.1	35.7	36.8	37.9	39.5
All Rural (nonmetro)	12.8	13.7	14.0	14.3	14.7	15.1	15.5	15.8
Adjacent to metro	11.8	12.8	13.1	13.4	13.8	14.1	14.5	14.8
Micro nonadjacent to metro	18.0	18.8	18.9	19.4	19.9	20.8	21.1	21.7
Small and remote adjacent to micro	8.3	8.6	8.8	8.7	8.9	9.1	9.5	9.6
Small and remote nonadjacent to micro	13.8	14.5	15.2	15.4	15.9	16.7	16.5	16.9

Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021.

**Figure 3. Change in Psychologists per 100,000 Population in U.S. Rural Counties, 2014-2021**



- Rural county without any psychologists in both 2014 and 2021
- Rural county with one or more psychologists in 2014 but none in 2021
- Rural county with a **decrease** in psychologists per capita from 2014 to 2021; decrease is **less** than the median county per capita decrease
- Rural county with a **decrease** in psychologists per capita from 2014 to 2021; decrease is **more** than the median county per capita decrease
- Rural county with an **increase** in psychologists per capita from 2014 to 2021; increase is **less** than the median county per capita increase
- Rural county with an **increase** in psychologists per capita from 2014 to 2021; increase is **more** than the median county per capita increase
- Urban county

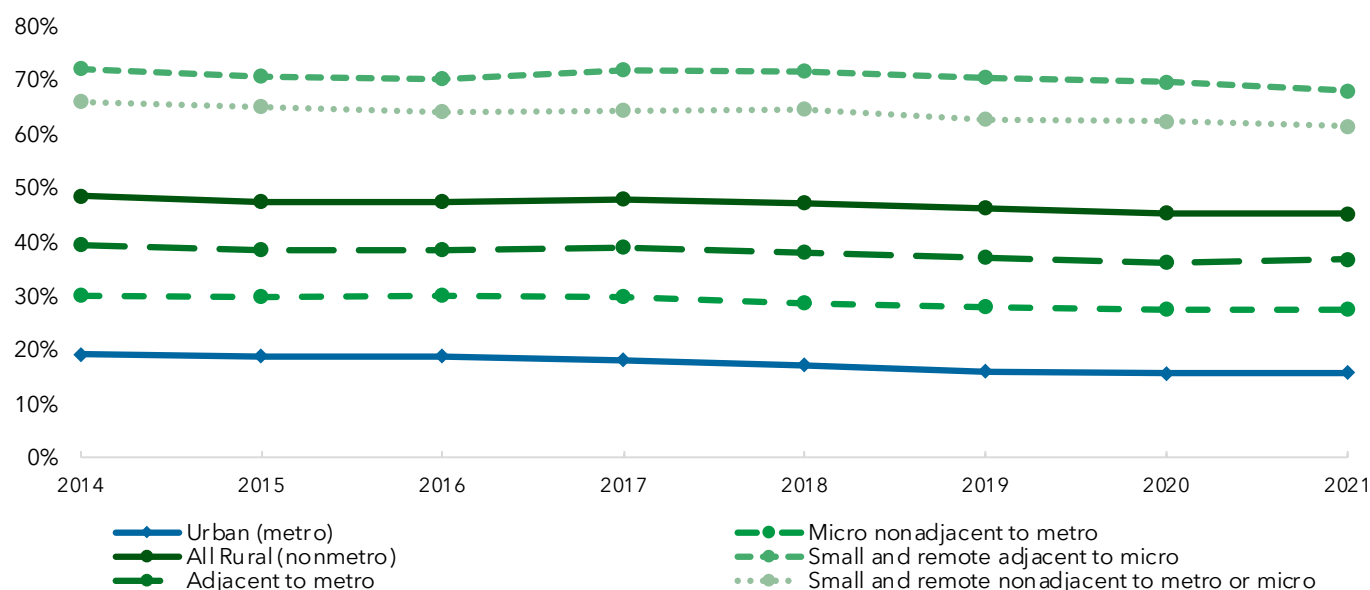
Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021.

**Table 2. Psychologists per 100,000 Population in U.S. Counties by Rural-Urban Location and Census Division†, 2014 and 2021**

	Urban		All Rural		Rural							
	Metro		Nonmetro		Adjacent to metro		Micropolitan nonadjacent to metro		Small and remote adjacent to micro		Small and remote nonadjacent to metro or micro	
	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021
Total U.S.	30.8	39.5	12.8	15.8	11.8	14.1	18.0	20.8	8.3	9.1	13.8	16.7
New England	54.0	68.9	42.9	50.4	37.7	44.8	58.7	74.9	92.4	90.6	33.0	34.6
Middle Atlantic	41.4	53.6	13.4	16.3	13.1	15.5	18.1	24.9	9.1	13.0	**	**
East North Central	31.6	43.4	11.6	16.3	10.8	15.7	18.2	24.4	6.3	8.5	14.0	15.5
West North Central	37.5	44.7	16.0	19.1	17.6	20.8	20.6	24.2	7.1	8.2	9.9	14.3
South Atlantic	24.9	32.4	9.7	12.6	9.0	11.9	18.1	21.5	8.8	12.3	6.9	8.9
East South Central	20.0	24.1	7.2	8.3	6.6	6.9	9.5	11.6	3.3	3.8	12.9	20.0
West South Central	15.2	18.5	6.8	7.7	5.7	6.7	9.4	10.2	5.3	5.4	16.7	16.0
Mountain	28.4	34.3	16.3	18.3	15.7	17.2	18.8	22.1	12.5	13.4	13.3	14.0
Pacific	34.4	45.6	18.7	23.4	16.4	22.2	24.3	26.8	2.6	7.2	15.2	21.3

Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021. \*\*There are no small and remote nonadjacent to metro or micro counties in the Middle Atlantic Census Division. †Census Divisions: New England—CT, ME, MA, NH, RI, VT; Middle Atlantic—NJ, NY, PA; East North Central—IL, IN, MI, OH, WI; West North Central—IA, KS, MN, MO, NE, ND, SD; South Atlantic—DE, DC, FL, GA, MD, NC, SC, VA, WV; East South Central—AL, KY, MS, TN; West South Central—AR, LA, OK, TX; Mountain—AZ, CO, ID, MT, NV, NM, UT, WY; Pacific—AK, CA, HI, OR, WA.

**Figure 4. Percentage of U.S. Rural and Urban Counties Without a Psychologist, 2014-2021**



Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021.

**Table 3. Percentage of U.S. Rural and Urban Counties Without a Psychologist, 2014-2021**

	2014	2015	2016	2017	2018	2019	2020	2021
Urban (metro)	19.2%	18.8%	18.8%	18.1%	17.0%	16.0%	15.6%	15.7%
All Rural (nonmetro)	48.5%	47.5%	47.3%	47.8%	47.2%	46.2%	45.4%	45.3%
Adjacent to metro	39.5%	38.4%	38.5%	38.9%	37.9%	37.1%	36.2%	36.9%
Micro nonadjacent to metro	30.1%	29.7%	30.1%	29.7%	28.6%	27.9%	27.5%	27.5%
Small and remote adjacent to micro	72.1%	70.8%	70.2%	71.8%	71.6%	70.5%	69.7%	68.1%
Small and remote nonadjacent to micro	66.0%	65.0%	64.1%	64.4%	64.7%	62.7%	62.4%	61.4%

Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021.

**Table 4. Percentage of U.S. Rural Counties Without a Psychologist by Census Division<sup>†</sup>, 2014-2021**

	2014	2015	2016	2017	2018	2019	2020	2021
Total U.S.	48.5%	47.5%	47.3%	47.8%	47.2%	46.2%	45.4%	45.3%
New England	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Middle Atlantic	9.3%	9.3%	9.3%	9.3%	9.3%	9.3%	9.3%	9.3%
East North Central	31.9%	29.3%	29.7%	31.2%	28.5%	27.4%	27.4%	27.0%
West North Central	62.7%	61.8%	61.0%	61.0%	61.0%	60.0%	58.8%	59.2%
South Atlantic	40.0%	38.1%	37.8%	38.5%	36.7%	35.2%	34.4%	33.3%
East South Central	52.7%	51.9%	52.3%	53.9%	53.5%	52.3%	51.0%	51.0%
West South Central	60.5%	60.5%	60.8%	61.1%	60.5%	60.2%	60.2%	60.8%
Mountain	46.8%	46.3%	46.3%	45.8%	46.8%	46.3%	45.8%	44.4%
Pacific	37.8%	36.7%	35.6%	35.6%	35.6%	32.2%	28.9%	30.0%

Data source: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI), 2014-2021. <sup>†</sup>Census Divisions: New England—CT, ME, MA, NH, RI, VT; Middle Atlantic—NJ, NY, PA; East North Central—IL, IN, MI, OH, WI; West North Central—IA, KS, MN, MO, NE, ND, SD; South Atlantic—DE, DC, FL, GA, MD, NC, SC, VA, WV; East South Central—AL, KY, MS, TN; West South Central—AR, LA, OK, TX; Mountain—AZ, CO, ID, MT, NV, NM, UT, WY; Pacific—AK, CA, HI, OR, WA.

#### County Category Designations

Urban: Metropolitan, i.e., counties with an urban core with a population of at least 50,000 residents (UIC 1-2).

All rural: Nonmetropolitan, i.e., counties without an urban core population of at least 50,000 residents (UIC 3-12).

Adjacent to metro: Counties next to a metropolitan county whose largest town has up to 49,999 residents (UIC 3-7).

Micro nonadjacent to metro: Micropolitan counties not next to a metropolitan county whose largest town has 10,000-49,999 residents (UIC 8).

Small and remote adjacent to micro: Counties next to a micropolitan county whose largest town has less than 10,000 residents (UIC 9-10).

Small and remote nonadjacent to metro or micro: Counties not next to a metropolitan or micropolitan county whose largest town has less than 10,000 residents (UIC 11-12).

**Suggested Citation:** Andrilla CHA, Woolcock SC, Garberson LA, Patterson DG. *Changes in the Supply and Rural-Urban Distribution of Psychologists in the U.S., 2014-2021*. Data Brief. WWAMI Rural Health Research Center, University of Washington; September 2022.

**Funding:** This study was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under cooperative agreement #U1CRH03712. The information, conclusions, and opinions expressed in this policy brief are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.