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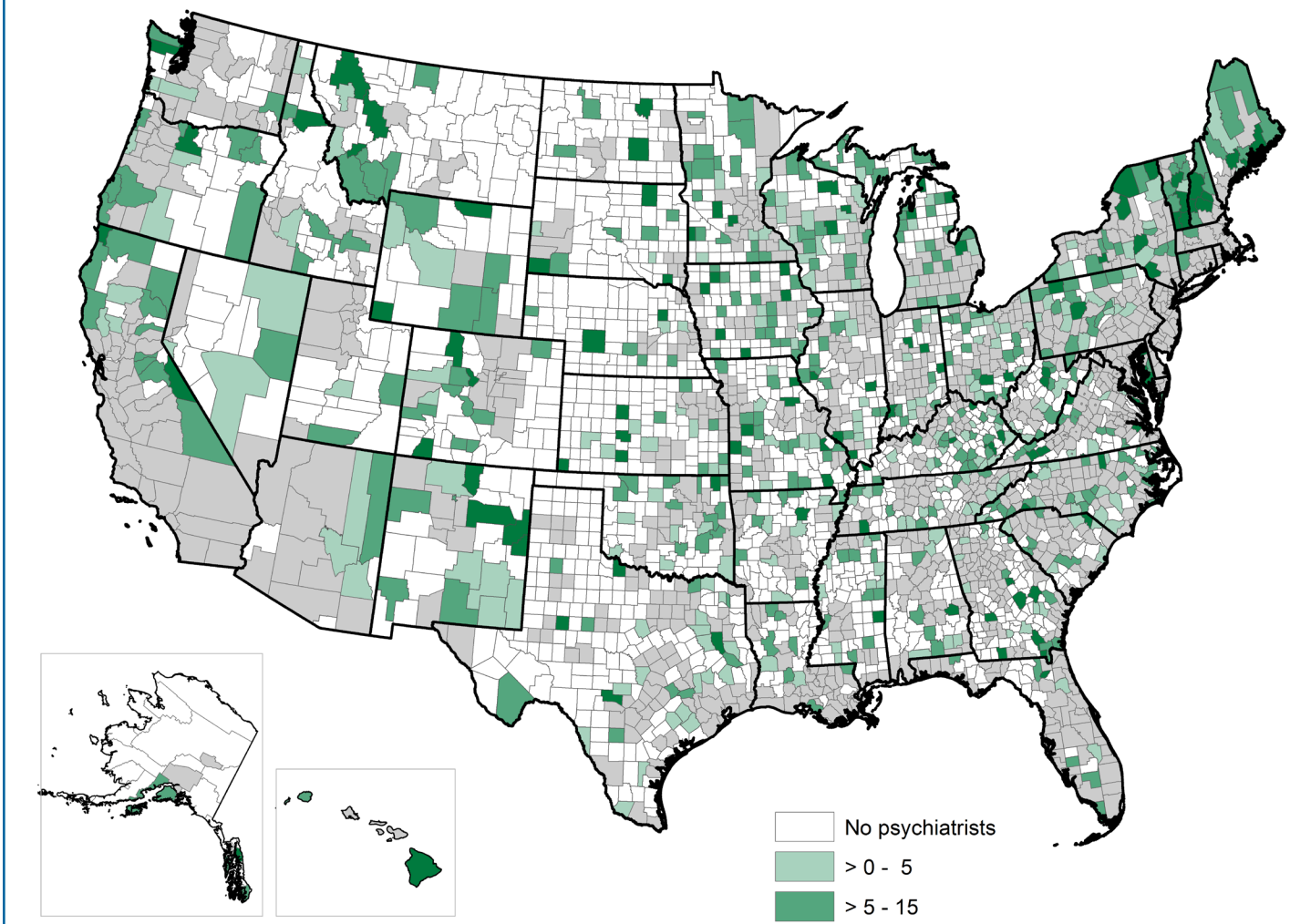
Supply and Distribution of the Behavioral Health Workforce in Rural America

Over 15 million rural Americans face some kind of behavioral health issue—substance abuse, mental illness, or medical-psychiatric co-morbid conditions.[1] While a variety of professionals that can provide care for a broad range of behavioral health issues are usually available in urban areas, residents of rural areas often face shortages of behavioral health providers. In addition, primary care providers often play a much larger role in behavioral health care delivery than they do in urban settings, requiring integration of primary care and behavioral health services.[2]

Psychiatrists in U.S. Counties per 100,000 Population.

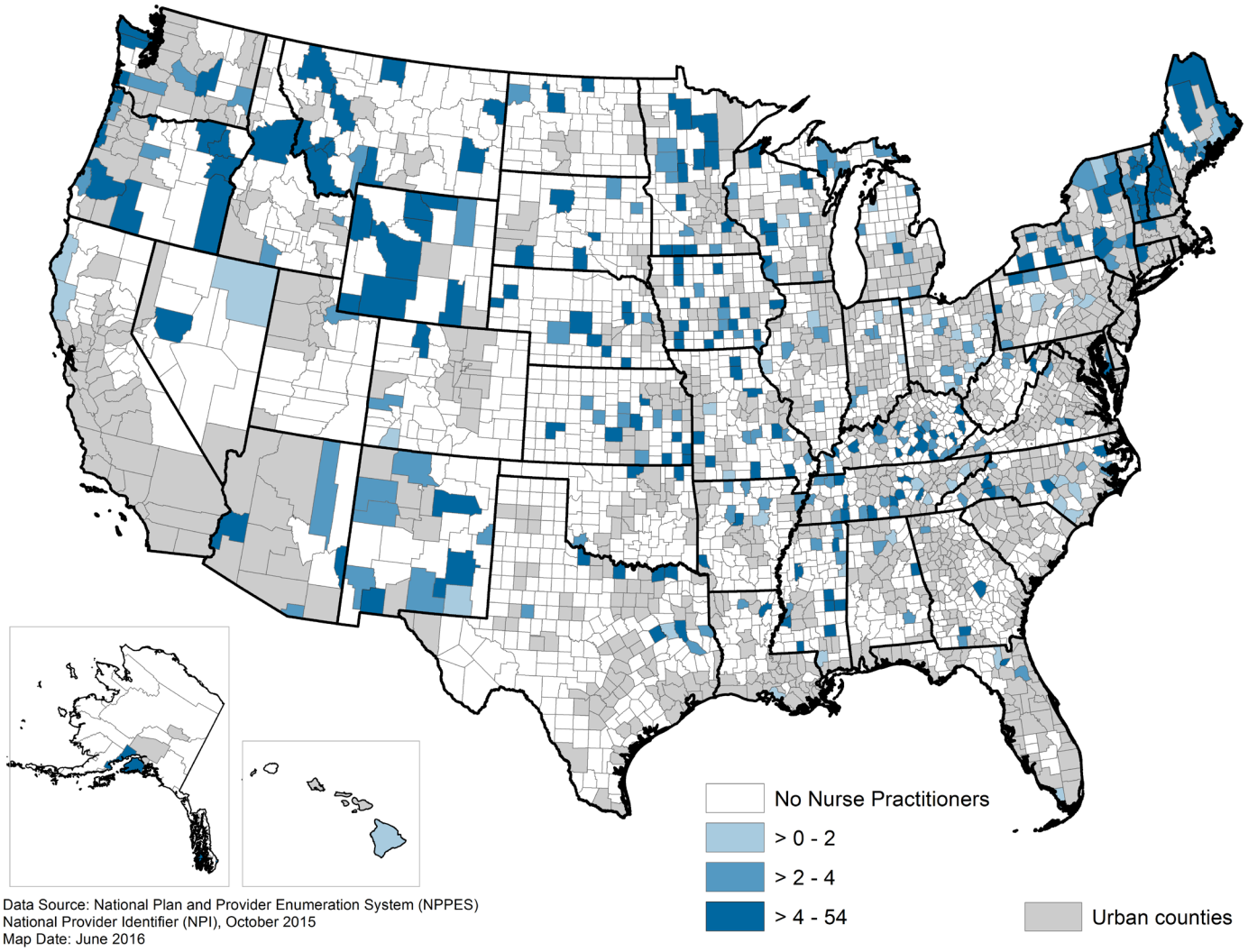


Data Source: National Plan and Provider Enumeration System (NPPES)
National Provider Identifier (NPI), October 2015
Map Date: June 2016

Accurate estimates of the number of rural psychiatrists and other behavioral health providers are especially important now, when an increasing number of rural residents are insured for behavioral health care and demand is growing.[2] Rural-urban disparities in behavioral health provider supply extend beyond the well-known shortages of psychiatrists to include clinical psychologists, psychiatric nurse practitioners, social workers and counselors.[3] The purpose of this data brief is to provide a description of the supply and distribution of these key types of providers in the rural U.S. (see the Data and Methods Box at the end of this brief for details about data sources and analytic methods).

The tables, maps and graphs presented below reveal large differences in the supply of behavioral health providers available to rural residents. Nationally, the per capita supply of behavioral health providers in non-metropolitan counties is significantly less than the supply in metropolitan counties. There is approximately one-third the supply of psychiatrists per capita, and less than half the per capita supply of psychologists in non-metropolitan counties when compared with metropolitan counties. Furthermore, non-

Psychiatric Nurse Practitioners in U.S. Counties per 100,000 Population.



Data Source: National Plan and Provider Enumeration System (NPPES)
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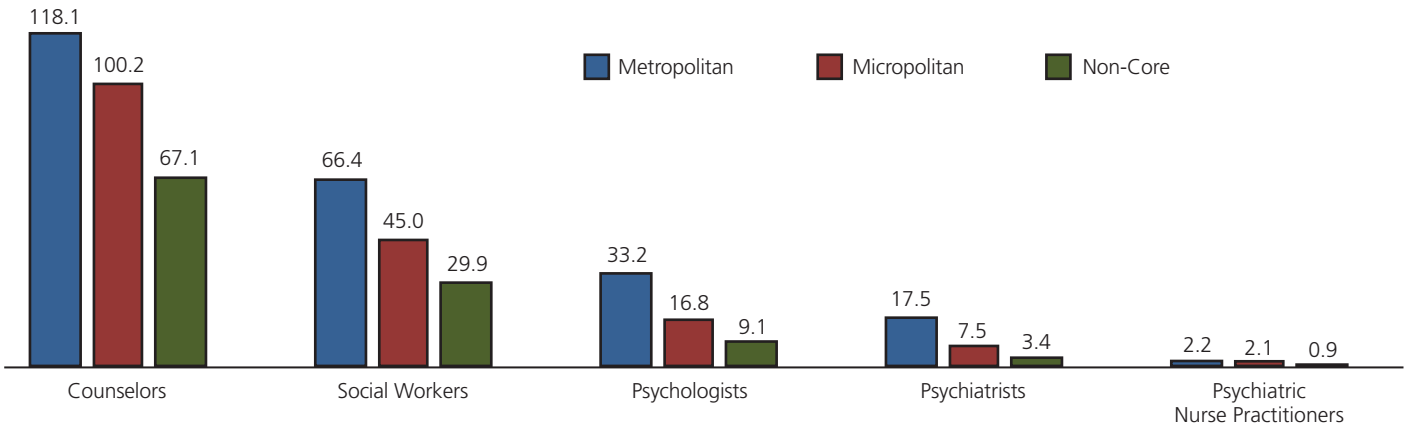
core rural counties of the U.S have far fewer behavioral health providers per capita than micropolitan rural areas. Understanding the variability of the geographic provider supply and the magnitude of rural-urban disparities described here is key to developing realistic approaches to improving access to behavioral health services for rural residents.

Behavioral Health Providers per 100,000 Population in U.S. Counties by Urban Influence Category.



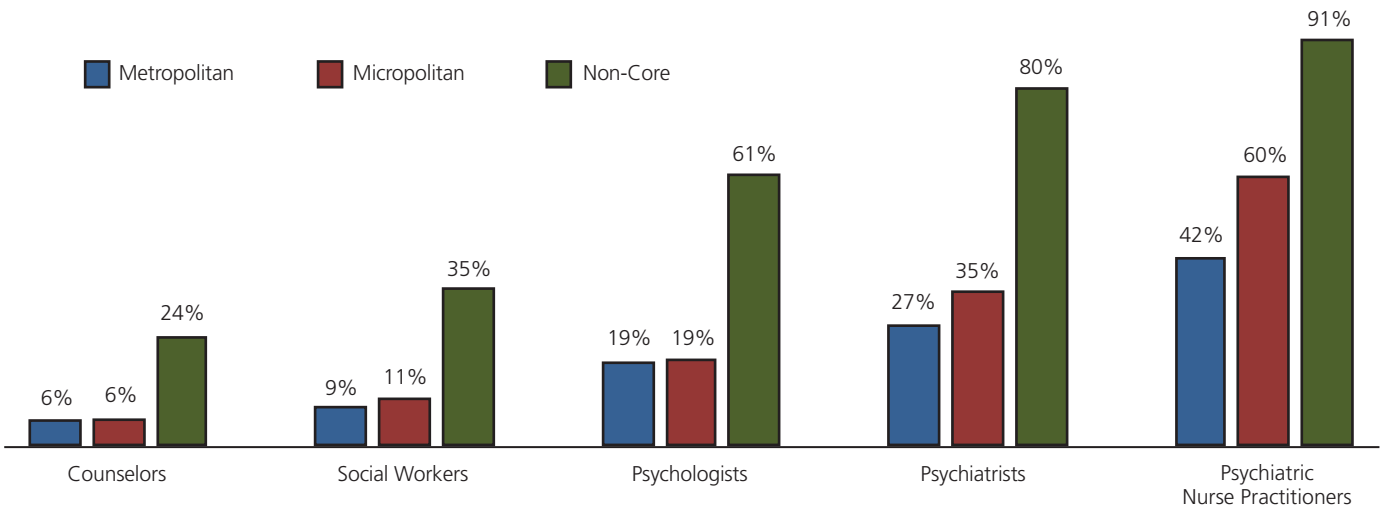
Data Sources: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI) data, October 2015, the U.S. Department of Agriculture Economic Research Service (ERS) Urban Influence Codes, 2013, and the 2014 Claritas U.S. population data.

Behavioral Health Providers per 100,000 Population in U.S. Counties by Urban Influence Category.

	Psychiatrists Provider/100,000 Pop (Count)	Psychologists Provider/100,000 Pop (Count)	Social Workers Provider/100,000 Pop (Count)	Psychiatric Nurse Practitioners Provider/100,000 Pop (Count)	Counselors Provider/100,000 Pop (Count)
U.S.	15.6 (50,232)	30.0 (96,307)	61.5 (197,813)	2.1 (6,772)	112.1 (360,217)
Metropolitan	17.5 (47,530)	33.2 (89,985)	66.4 (179,831)	2.2 (6,014)	118.1 (320,116)
Non-Metro	5.8 (2,702)	13.7 (6,322)	38.9 (17,982)	1.6 (758)	86.7 (40,101)
Micropolitan	7.5 (2,064)	16.8 (4,604)	45.0 (12,336)	2.1 (580)	100.2 (27,457)
Non-core	3.4 (638)	9.1 (1,718)	29.9 (5,646)	0.9 (178)	67.1 (12,644)

Data Sources: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI) data, October 2015, the U.S. Department of Agriculture Economic Research Service (ERS) Urban Influence Codes, 2013, and the 2014 Claritas U.S. population data.

U.S. Counties Without Behavioral Health Providers by Urban Influence Category.



Data Sources: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI) data, October 2015, the U.S. Department of Agriculture Economic Research Service (ERS) Urban Influence Codes, 2013.

U.S. Counties Without Behavioral Health Providers by Urban Influence Category.

	Counties without Psychiatrists (Percent)	Counties without Psychologists (Percent)	Counties without Social Workers (Percent)	Counties without Psychiatric Nurse Practitioners (Percent)	Counties without Counselors (Percent)	Total Counties without Behavioral Health Providers (Percent)
U.S (3135 counties)	1,606 (51%)	1,153 (37%)	641 (20%)	2,092 (67%)	430 (14%)	284 (9%)
Metropolitan (1164 counties)	315 (27%)	218 (19%)	102 (9%)	491 (42%)	67 (6%)	32 (3%)
Non-Metro (1971 counties)	1,291 (65%)	935 (47%)	539 (27%)	1,601 (81%)	363 (18%)	252 (13%)
Micropolitan (640 counties)	222 (35%)	124 (19%)	68 (11%)	387 (60%)	38 (6%)	31 (5%)
Non-core (1331 counties)	1,069 (80%)	811 (61%)	471 (35%)	1,214 (91%)	325 (24%)	221 (17%)

Data Sources: National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI) data, October 2015, the U.S. Department of Agriculture Economic Research Service (ERS) Urban Influence Codes, 2013.

DATA AND METHODS

This study used the National Plan and Provider Enumeration System (NPPES) National Provider Identifier (NPI) data downloaded October 2015, the U.S. Department of Agriculture Economic Research Service (ERS) Urban Influence Codes, 2013, and the 2014 Claritas U.S. population data.

All U.S. counties were categorized into one of three geographic categories: Metropolitan, Micropolitan and Non-core using the ERS Urban Influence Codes (UIC). The 12 UIC categories were grouped as follows: Metropolitan (UIC 1,2), Micropolitan (UIC 3,5,8), and Non-Core (UIC 4,6,7,9-12). Provider counts and provider-to-population ratios were calculated for each type of provider in each county.

The following five types of behavioral health providers are included in these analyses: Psychiatrists, Psychologists, Social Workers, Psychiatric Nurse Practitioners, and Counselors. The following taxonomy descriptions and codes were included for each of the five provider types: Psychiatrists: Addiction Medicine - 2084A0401X, Addiction Psychiatry - 2084P0802X, Behavioral Neurology & Neuropsychiatry - 2084B0040X, Child & Adolescent Psychiatry - 2084P0804X, Geriatric Psychiatry - 2084P0805X, Hospice & Palliative Medicine - 2084H0002X, Pain Medicine - 2084P2900X, Psychiatry - 2084P0800X, Psychosomatic Medicine - 2084P0015X, Sleep Medicine - 2084S0012X Psychologists: : Psychologist - 103T00000X, Addiction - 103TA0400X, Adult Development & Aging - 103TA0700X, Clinical - 103TC0700X, Clinical Child & Adolescent - 103TC2200X, Cognitive & Behavioral - 103TB0200X, Counseling - 103TC1900X, Educational - 103TE1000X, Family - 103TF0000X, Group Psychotherapy - 103TP2701X, Health - 103TH0004X, Health Service - 103TH0100X, Mental Retardation & Developmental Disabilities - 103TM1800X, Prescribing (Medical) - 103TP0016X, Psychoanalysis - 103TP0814X, Psychotherapy - 103TP2700X, Rehabilitation - 103TR0400X, School - 103TS0200X, Women - 103TW0100X Social Workers: Social Worker - 104100000X, Clinical - 1041C0700X, School - 1041S0200X Psychiatric Nurse Practitioners: Psychiatric/Mental Health - 363LP0808X Counselors: Behavioral Analyst - 103K00000X, Clinical Neuropsychologist - 103G00000X, 103GC0700X, Counselor - 101Y00000X, Addiction - 101YA0400X, Pastoral - 101YP1600X, Professional - 101YP2500X, School - 101YS0200X, Marriage & Family Therapist - 106H00000X, Poetry Therapist - 102X00000X, Psychoanalyst - 102L00000X.

The NPPES NPI data have some limitations. Individuals in a group practice may obtain either an individual NPI and/or a group NPI, depending on how their practice is structured. Additionally, the data only include providers that have billed the Centers for Medicare and Medicaid Services (CMS) for services provided.[4] For these reasons, NPPES NPI data may undercount total numbers of individual providers. Nonetheless, the NPI data should provide a reasonably accurate picture of the relative availability of providers across various geographic classifications.

REFERENCES

1. Roberts LW, Battaglia J, Epstein RS. Frontier ethics: mental health care needs and ethical dilemmas in rural communities. Psychiatr Serv. 1999;50(4):497-503.

2. Miller BF, Druss B. The role of family physicians in mental health care delivery in the United States: implications for health reform. *J Am Board Fam Med.* 2013;26(2):111-113.

3. Bishop TF, Seirup JK, Pincus HA, Ross JS. Population of US practicing psychiatrists declined, 2003-13, which may help explain poor access to mental health care. *Health Aff (Millwood).* 2016;35(7):1271-1277.

4. Bindman AB. Using the National Provider Identifier for health care workforce evaluation. *Medicare Medicaid Res Rev.* 2013;3(3).

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