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WWAMI • ruralhealth researchcenter
UNIVERSITY of WASHINGTON

The Rural and Urban Supply of Clinicians With a DEA Waiver to Prescribe Buprenorphine in 2022

Prior to the Elimination of the Waiver Requirement

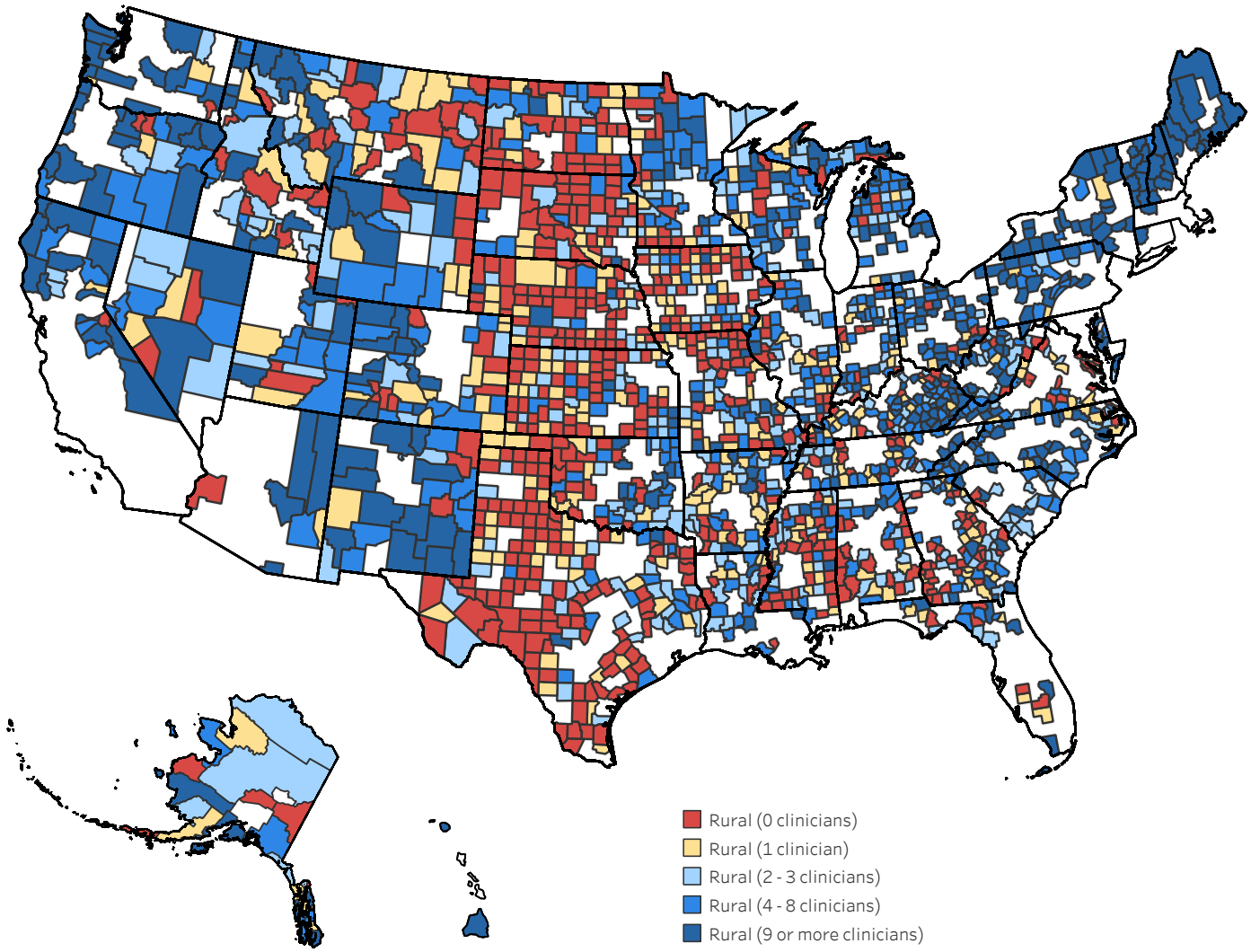
KEY FINDINGS

- In 2022, almost one-third of rural counties (30.1%) lacked a clinician with a waiver to prescribe buprenorphine compared with only 10.4% of urban counties. An even higher proportion of small and remote rural counties did not have a waivered clinician (41.3%).
- Nationally, more counties had a waivered clinician in 2022 (77.2%) than in 2017 (57.7%), but rural-urban differences in waivered clinicians per 100,000 population persisted over this time: rural counties overall continued to have a lower per capita supply in 2022 compared to urban counties. By 2022, however, the ratio of waivered clinicians per 100,000 population in rural micropolitan counties not adjacent to metropolitan counties (32.4) was similar to the ratio in urban counties (32.6).
- The supply of waivered advanced practice clinicians (nurse practitioners, physician assistants, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives) per 100,000 population in rural counties (11.4) was slightly higher than in urban counties (10.2) in 2022. While physicians in urban and most rural counties had more potential treatment slot capacity per 100,000 population (maximum number of patients allowed by each clinicians' waiver type), in small and remote rural counties, this ratio was higher for advanced practice clinicians (1,122.9) than for physicians (1,032.9).
- Census Divisions varied in their supply of DEA-waivered clinicians and treatment slots. In the West North Central and West South Central Census Divisions, fewer rural counties had a waivered clinician and the ratios of clinicians and potential treatment slots per capita were lower compared to rural counties in other Census Divisions.

The opioid epidemic is an enduring problem in the United States (U.S.), particularly for rural communities. In 2023, 81,365 people died of an opioid overdose, an increase of 171% since 2018.[1] Approximately 6.1 million Americans had opioid use disorder (OUD), including 265,000 youth ages 12 to 17 years old, in 2022.[2] Buprenorphine is an effective medication for the treatment of opioid use disorder (MOUD) and is approved by the FDA as treatment for adolescents ages 16 years and older with OUD.[3–5] Before 2023, eligible clinicians were required to obtain a waiver from the Drug Enforcement Administration (DEA) to prescribe buprenorphine for OUD. Until 2016, only physicians could obtain a DEA waiver.[6] The Comprehensive Addiction and Recovery Act (CARA) in 2016 allowed nurse practitioners and physician assistants to obtain a DEA waiver, and then the Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities (SUPPORT) Act of 2018 allowed clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives to obtain waivers.[7,8] DEA-waivered clinicians were limited to prescribing to 30 patients for the first year, but could apply to increase their limits to 100 and then 275 patients in subsequent years (in this brief, we refer to the maximum number of

patients each clinicians' waiver limit allowed them to treat as "potential treatment slots"). Despite the legislation expanding clinicians eligible to prescribe MOUD, rural counties have had a persistently lower supply of waivered clinicians compared to urban counties.[9] The Consolidated Appropriations Act of 2023 eliminated the DEA waiver requirement to prescribe buprenorphine.[10] This data brief describes the supply of all clinicians with a DEA waiver to prescribe MOUD from 2017 to 2022, prior to the elimination of the waiver requirement, with the goal of better understanding the potential workforce available to prescribe MOUD to youth with OUD. However, this data source does not discern which clinicians treat or do not treat youth. Data and methods are further described in the Appendix.

Figure 1. Supply of DEA Waivered Clinicians in U.S. Rural Counties, November 2022



Data Source: Drug Enforcement Administration (DEA)

Growth in DEA-waivered clinicians. Figure 1 shows a map of the supply of DEA-waivered clinicians in rural counties in 2022. Prior to the elimination of the DEA waiver requirement in January 2023, the percentage of U.S. counties with a DEA waivered clinician was lower in rural counties overall (69.9%) compared to urban counties (89.6%) (Table 1). From 2017 to 2022, the increase in the number of counties with a waivered clinician was higher in rural areas (+24.0%) compared to urban areas (+11.7%), but almost one-third of rural counties (30.1%) remained without a waivered clinician, and even more small

and remote rural counties lacked a waivered clinician (41.3%) in 2022. During this 5-year period, the types of clinicians who were eligible to obtain a waiver were expanded, which also contributed to the increase in the number of counties with a waivered clinician.[9,11]

Table 1. Supply of Clinicians With a DEA Waiver to Prescribe Buprenorphine to Treat Opioid Use Disorder in U.S. Rural and Urban Counties, November 2022

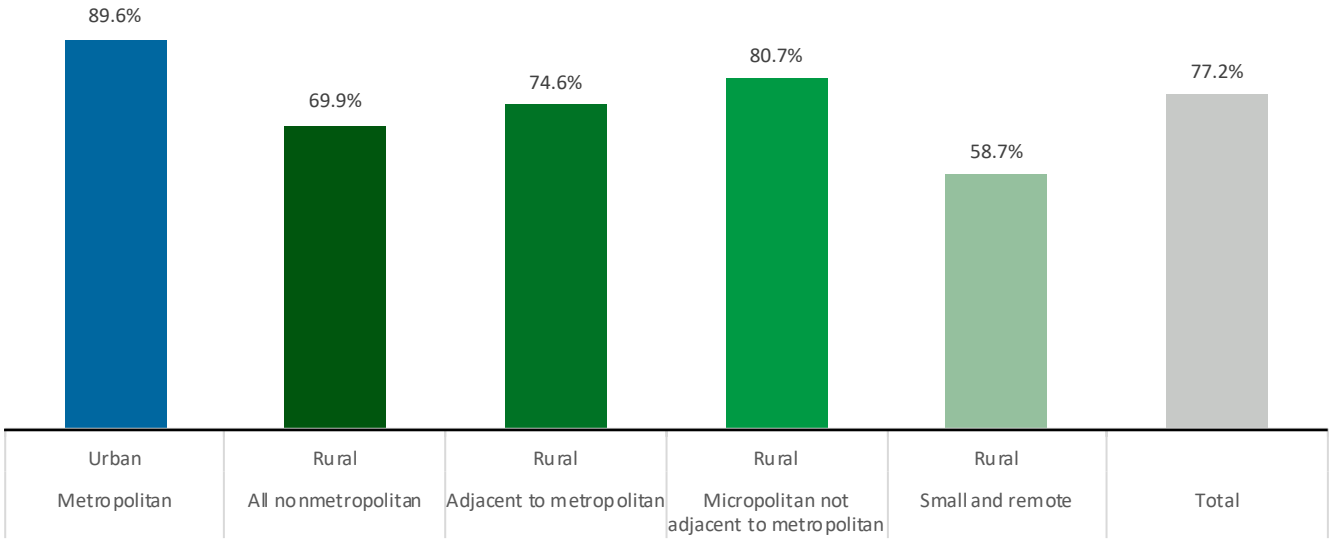
	Metropolitan[a] (urban) counties	All nonmetropolitan[b] (rural) counties	Rural counties			Total
			Adjacent to metropolitan[c]	Micropolitan not adjacent to metropolitan[d]	Small and remote[e]	
U.S. population, N (%)	288,010,465 (86.2%)	46,269,532 (13.8%)	30,580,580 (9.1%)	8,901,161 (2.7%)	6,787,791 (2.0%)	334,279,997 (100.0%)
Total counties	1,166	1,976	1,027	269	680	3142
Counties with ≥1 waivered clinician, N (%)	1,045 (89.6%)	1,382 (69.9%)	766 (74.6%)	217 (80.7%)	399 (58.7%)	2,427 (77.2%)
% difference in counties with ≥1 waivered clinician, 2017 to 2022[f]	+11.7%	+24.0%	+23.3%	+17.9%	+28.0%	+19.5%
Counties without a waivered clinician, N (%)	121 (10.4%)	594 (30.1%)	261 (25.4%)	52 (19.3%)	281 (41.3%)	715 (22.8%)
Counties with only 1 waivered clinician, N (%)	88 (7.6%)	286 (14.5%)	141 (13.7%)	18 (6.7%)	127 (18.7%)	374 (11.9%)
Counties with ≥1 waivered physician, N (%)	987 (84.7%)	1,184 (59.9%)	666 (64.9%)	205 (76.2%)	313 (46.0%)	2,171 (69.1%)
Counties with ≥1 waivered advanced practice clinician[g] N (%)	947 (81.2%)	1,092 (55.3%)	604 (58.8%)	195 (72.5%)	293 (43.1%)	2,039 (64.9%)
Waivered clinicians per 100,000 population						
All clinicians	32.6	25.2	22.5	32.4	27.9	31.6
Physicians	22.5	13.8	12.4	18.3	14.1	21.3
Advanced practice clinicians[g]	10.2	11.4	10.1	14.1	13.8	10.3
Potential treatment slots per 100,000 population[h]						
All clinicians	2,245.8	1,904.7	1,715.7	2,362.8	2,155.5	2,198.6
Physicians	1,461.4	997.9	921.5	1,233.9	1,032.6	1,397.3
Advanced practice clinicians[g]	784.3	906.8	794.2	1,128.9	1,122.9	801.3

DEA = Drug Enforcement Administration; UIC = Urban Influence Code.

[a]Counties with an urban core with a population of at least 50,000, UICs 1-2.
[b]Counties without an urban core and a population less than 50,000 residents, UICs 3-12.
[c]Counties geographically adjacent to a metropolitan area whose largest town/urban cluster has 2,500-49,999 population, UICs 3-7.
[d]Counties not adjacent to a metropolitan area and whose largest town/urban cluster has 10,000-49,999 residents, UIC 8.
[e]Counties whose largest town has fewer than 10,000 population regardless of proximity to a micropolitan county, UICs 9-12.
[f]2017 data on counties with at least 1 waivered clinician obtained from Andrilla, et al., 2019.[12]
[g]Advanced practice clinicians include nurse practitioners, physician assistants, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives.
[h]DEA waiver types authorized clinicians to treat a maximum of 30, 100, or 275 patients concurrently depending on the length of time they had held the waiver, their practice location, and clinical specialty.

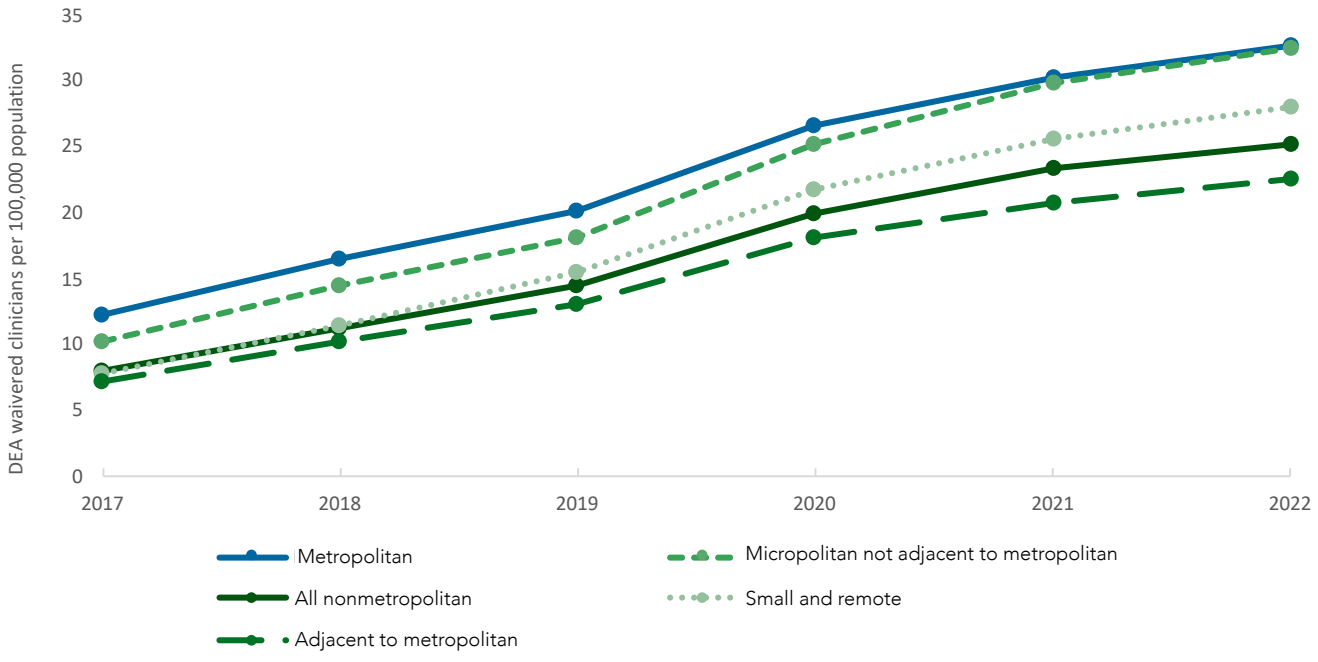
From 2017 through 2022, the supply of DEA waivered clinicians per 100,000 population grew in both urban and rural counties. By 2022, the supply of DEA waivered clinicians in micropolitan not adjacent to metropolitan counties (32.4 per 100,000 population) was almost as high as urban counties (32.6 per 100,000 population) (Figure 3). The greatest growth per 100,000 population was in small and remote rural counties, 358%, from 7.8 clinicians per capita in 2017 to 27.9 in 2022 (Figure 3).

Figure 2. Percentage of Rural and Urban[a] Counties With a DEA Waivered Clinician, November 2022



UIC = Urban Influence Code.
[a]Urban/Metropolitan = counties with an urban core with a population of at least 50,000, UIC 1-2. Rural: All nonmetropolitan = counties without an urban core and a population less than 50,000 residents, UICs 3-12; Adjacent to metropolitan = counties geographically adjacent to a metropolitan area whose largest town/urban cluster has 2,500-49,999 population, UIC 3-7; Micropolitan not adjacent to metropolitan = counties not adjacent to a metropolitan area and whose largest town/urban cluster has 10,000-49,999 residents, UIC 8; Small and remote = counties whose largest town has fewer than 10,000 population regardless of proximity to a micropolitan county, UIC 9-12.

Figure 3. Trends in the Rural and Urban[a] Supply of DEA Waivered Clinicians per 100,000 Population, 2017-2022



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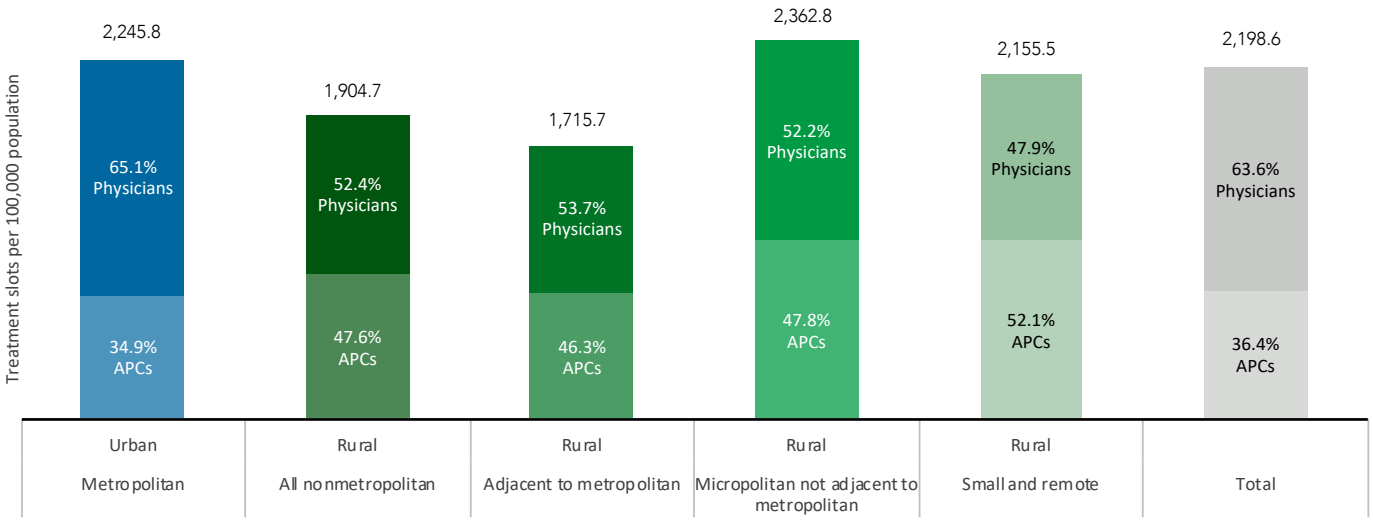
Trends by type of clinician. In 2022, the supply of waivered advanced practice clinicians (nurse practitioners, physician assistants, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives) was slightly greater in rural (11.4 per 100,000 population) than urban counties (10.2 per 100,000 population) (Table 1). Advanced practice clinicians were responsible for a greater proportion of the treatment capacity in rural counties compared to urban counties (Figure 4). Advanced practice clinicians contributed just under half of the total available treatment slots in rural counties (47.6%), while contributing 34.9% of the total available treatment slots in urban counties. This was especially true in small and remote rural counties. Advanced practice clinicians in small and remote rural counties supplied more potential treatment slots (1,122.9 per 100,000 population) than physicians (1,032.6 per 100,000 population). In small and remote rural counties, advanced practice clinicians supplied over half of available treatment slots (52.1%) compared to physicians who contributed just under half of available treatment slots (47.9%).

Figure 4. Rural and Urban[a] Total Number and Percentage[b] of Treatment Slots[c] to Prescribe Buprenorphine per 100,000 Population by Physicians and Advanced Practice Clinicians (APCs)[d], November 2022



UIC = Urban Influence Code. APC = Advanced Practice Clinician.
[a]Urban/Metropolitan = counties with an urban core with a population of at least 50,000, UIC 1-2. Rural: All nonmetropolitan = counties without an urban core and a population less than 50,000 residents, UICs 3-12; Adjacent to metropolitan = counties geographically adjacent to a metropolitan area whose largest town/urban cluster has 2,500-49,999 population, UIC 3-7; Micropolitan not adjacent to metropolitan = counties not adjacent to a metropolitan area and whose largest town/urban cluster has 10,000-49,999 residents, UIC 8; Small and remote = counties whose largest town has fewer than 10,000 population regardless of proximity to a micropolitan county, UIC 9-12.
[b]Total treatment slots contributed by each clinician type by rural-urban category available in table 1.
[c]DEA waiver types authorized clinicians to treat a maximum of 30, 100, or 275 patients concurrently depending on the length of time they had held the waiver, their practice location, and clinical specialty.
[d]Advanced practice clinicians include nurse practitioners, physician assistants, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives.

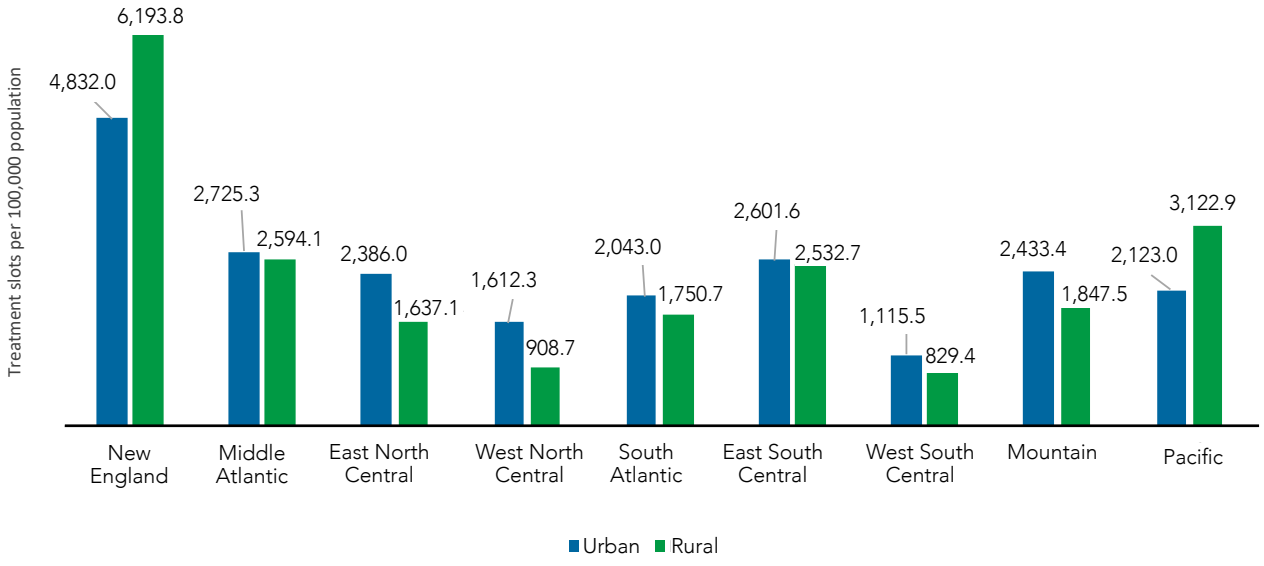
Supply of DEA-waivered clinicians by Census Division. In 2022, the supply of DEA-waivered clinicians varied across the nine U.S. Census Divisions. Except for two Census Divisions where all counties had a waivered clinician (New England and Middle Atlantic), a greater proportion of urban counties had a waivered clinician than rural counties in the remaining seven Census Divisions (Table 2). The New England and Pacific Census Divisions were the only two where rural counties had a greater supply of DEA-waivered clinicians and potential treatment slots per 100,000 (Figure 5). Rural counties in the West North Central and West South Central Census Divisions had lower proportions of counties with a waivered clinician, waivered clinicians-to-population ratio, and potential treatment slots-to-population ratio compared to the other Census Divisions.

Table 2. Rural and Urban Supply of Clinicians With a DEA Waiver to Prescribe Buprenorphine to Treat Opioid Use Disorder by Census Division[a], November 2022

	Counties with ≥1 waivered clinician (%)		Waivered clinicians per 100,000 Population		Treatment slots per 100,000 population[b]	
	Metropolitan[c] (urban)	Nonmetropolitan[d] (rural)	Metropolitan[c] (urban)	Nonmetropolitan[d] (rural)	Metropolitan[c] (urban)	Nonmetropolitan[d] (rural)
New England	100.0%	100.0%	72.3	87.1	4,832.0	6,193.8
Middle Atlantic	100.0%	100.0%	40.9	32.1	2,725.3	2,594.1
East North Central	92.5%	84.8%	32.8	21.5	2,386.0	1,637.1
West North Central	77.3%	52.0%	25.7	15.8	1,612.3	908.7
South Atlantic	89.8%	78.1%	26.8	21.0	2,043.0	1,750.7
East South Central	90.2%	72.6%	25.7	20.6	2,601.6	2,532.7
West South Central	83.9%	56.2%	15.0	11.1	1,115.5	829.4
Mountain	87.7%	78.7%	38.8	34.0	2,433.4	1,847.5
Pacific	97.4%	90.0%	36.0	51.3	2,123.0	3,122.9

UIC = Urban Influence Code
[a]Census Divisions (number of urban and rural counties): New England (34 urban counties, 33 rural counties) = CT, ME, MA, NH, RI, VT; Middle Atlantic (96 urban counties, 54 rural counties) = NJ, NY, PA; East North Central (174 urban counties, 263 rural counties) = IL, IN, MI, OH, WI; West North Central (128 urban counties, 490 rural counties) = IA, KS, MN, MO, NE, ND, SD; South Atlantic (314 urban counties, 274 rural counties) = DE, DC, FL, GA, MD, NC, SC, VA, WV; East South Central (123 urban counties, 241 rural counties) = AL, KY, MS, TN; West South Central (155 urban counties, 315 rural counties) = AR, LA, OK, TX; Mountain (65 urban counties, 216 rural counties) = AZ, CO, ID, MT, NV, NM, UT, WY; Pacific (77 urban counties, 90 rural counties) = AK, CA, HI, OR, WA.
[b]DEA waiver types authorized clinicians to treat a maximum of 30, 100, or 275 patients concurrently depending on the length of time they had held the waiver, their practice location, and clinical specialty.
[c]Urban/metropolitan = counties with an urban core and a population of at least 50,000 residents, UIC 1-2.
[d]Rural/nonmetropolitan = counties without an urban core and a population less than 50,000 residents, UIC 3-12.

Figure 5. Rural and Urban[a], Treatment Slots[b] per 100,000 Population to Prescribe Buprenorphine by Census Division[c], November 2022



UIC = Urban Influence Code.
[a]Urban/metropolitan = counties with an urban core with a population of at least 50,000 residents, UIC 1-2; Rural/nonmetropolitan = counties without an urban core and a population less than 50,000 residents, UICs 3-12;
[b]DEA waiver types authorized clinicians to treat a maximum of 30, 100, or 275 patients concurrently depending on the length of time they had held the waiver, their practice location, and clinical specialty.
[c]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.

Conclusions and Policy Considerations. In the five years prior to the elimination of the waiver requirement, rural counties had greater growth in the proportion of counties with at least one waivered clinician (+24.0%) compared to urban counties (+11.7%). Despite this growth, the disparity in the supply of waivered clinicians between rural and urban counties persisted while the waiver was in effect. This was especially apparent in the small and remote rural counties and in particular regions of the rural U.S., such as the West North Central and West South Central Census Divisions, where there are greater numbers of counties without any waivered clinician. Rural clinicians had fewer resources and supports to help them complete additional training and administrative hurdles that further limited the number of rural clinicians obtaining waivers.[12–15] Rural communities tend to have a greater supply of advanced practice clinicians compared to physicians, and these clinicians contributed a greater number of potential treatment slots in small and remote rural communities than physicians.

The elimination of the DEA waiver requirement makes all clinicians with a current schedule III DEA registration who have completed any training requirements able to prescribe buprenorphine if permitted by state law.[10] This greatly expands the available rural workforce that can prescribe MOUD. This includes a number of clinicians, including pediatricians and primary care nurse practitioners, who treat youth in primary care. However, this expansion of the potential MOUD workforce does not indicate whether these new clinicians will actively prescribe buprenorphine to youth with OUD. The elimination of the waiver requirement also removed limits on patient treatment slots. However, most waivered clinicians did not prescribe at or near their maximum potential treatment slot capacity before the waiver elimination, so removal of the waiver is not likely to expand this aspect of treatment capacity on its own.[14,16]

During this time while the available MOUD treatment workforce has been expanding, the COVID-19 pandemic has also impacted how patients access this care. Flexibilities allowing the initiation of buprenorphine via telehealth helped maintain access to MOUD while in-person care was limited.[17] Preliminary studies suggest that patients' MOUD treatment outcomes are similar when care is provided via telehealth versus in-person.[17,18] However, rural patients face unique challenges accessing telehealth with variable access to broadband in rural communities across the U.S, and little is known yet how the telehealth expansion during the pandemic impacted rural populations specifically.[19,20] Providing adequate training, support, and reimbursement, and addressing transportation barriers, telehealth access, and stigma towards patients receiving MOUD, will be needed to ensure rural communities have equitable access to these services.

LIMITATIONS

These findings describe counties where there was at least one clinician with a DEA waiver, but the DEA data do not describe which waivered clinicians were actually prescribing, accepting new patients, or if they provided this care to youth in their practice. The potential treatment slots describes the maximum number of patients that could be given care by waivered clinicians, but many clinicians report not actually treating at or near their maximum patient limit.[14,16] Clinicians were mapped to a county based on the ZIP code associated with their DEA registration, but it is possible that clinicians practice across county lines, at multiple sites in different counties, or via telehealth, thus their location may be subject to misclassification. Although some rural counties may have available clinicians and treatment slots, there may also be unmeasured transportation barriers for patients to travel to receive care, particularly in counties that are geographically large.

APPENDIX

DATA AND METHODS

This study used DEA lists of clinicians with a waiver to prescribe buprenorphine for the treatment of OUD (December 2017, October 2018, July 2019, October 2020, August 2021, and November 2022), U.S. Department of Agriculture Economic Research Service Urban Influence Codes (UICs, 2013), U.S. Department of Housing and Urban Development (HUD)-U.S. Postal Service ZIP Code Crosswalk files, and Claritas U.S. population data (2022). We used data from November 2022 to represent the supply of clinicians with a DEA waiver one month prior to the waiver requirement being eliminated in December 2022.[10]

We used the ZIP code from the DEA waiver list to determine the clinician's county and then categorized it into one of four geographic types using UICs: metropolitan (UIC 1, 2), adjacent to metropolitan (UIC 3-7), micropolitan not adjacent to metropolitan (UIC 8), and small and remote counties (UIC 9-12). A combined rural/nonmetropolitan category was defined as UICs 3-12. We calculated the percentage of rural counties that had at least one DEA-waivered clinician. DEA waiver types authorized clinicians to treat 30, 100, or 275 patients concurrently depending on the length of time they had held the waiver, their practice location, and clinical specialty. We used the type of DEA waiver limits and the county population to calculate the ratios of clinicians and MOUD treatment slots per 100,000 population.

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