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State and Regional Differences in Access to Hospital-Based Obstetric Services for Rural Residents, 2018

Julia D. Interrante, MPH
Mariana S. Tuttle, MPH
Bridget Basile Ibrahim, PhD, MA
Lindsay K. Admon, MD, MSc
Katy B. Kozhimannil, PhD, MPA

Key Findings

- **There is substantial state and regional variability in the number and proportion of rural hospitals that offer obstetric services in the U.S.**
- **The South was the U.S. region with the lowest density of rural hospitals with obstetric services available to patients who may need them (7 per 100,000); states with the lowest density included Florida, Connecticut, Alabama, Virginia, and South Carolina (3-6 per 100,000).**
- **Of the 17 states classified as highly rural, 29% (n=5) had less than the median number of rural hospital-based obstetric services available (9 per 100,000). These were Mississippi, Kentucky, Arkansas, New Hampshire, and Oklahoma, states where access to rural obstetric services may be most limited.**
- **Of the nine states with the most racially diverse rural populations who may need obstetric services, 78% (n=7) had less than the median number of rural hospital-based obstetric services available, including four states with the lowest density (3-7 per 100,000). These were Alabama, South Carolina, North Carolina, Mississippi, Louisiana, Georgia, and Hawaii, indicating more limited access to obstetric services in states with racially diverse rural populations.**

Purpose

Being pregnant in rural America presents unique challenges, as access to obstetric services continues to decline. Access to health care, as well as the social, economic, and environmental support for healthy pregnancy and childbirth, vary across rural areas and by state and U.S. region. The purpose of this policy brief is to measure state and regional differences in the availability of hospital-based obstetric services among rural hospitals in the United States in 2018.

Background and Policy Context

More than 18 million women of reproductive age live in rural counties across the U.S. and may need access to a hospital with obstetric services if they become pregnant.[1] Yet in 2018, 56% of rural counties nationwide did not have hospital-based obstetric services, up from 45% in 2004.[2,3] Lack of hospital-based obstetric services is associated with increases in out-of-hospital births and preterm birth, the leading cause of infant death.[4,5] There are known geographic and racial disparities in poor maternal and infant outcomes: rural women have 9% greater risk of maternal morbidity and mortality than urban women, maternal mortality is 2-3 times greater for Black and Indigenous compared to white women, and infant mortality is 140% higher for Black and 60% higher for Indigenous populations compared to their white counterparts.[6–8] These risks are compounded where geography and race intersect. For example, maternal morbidity and mortality risks are greatest for Indigenous rural residents compared to Indigenous urban, white rural, and white urban residents.[9] Further, loss of hospital-based obstetric services is most prominent in rural communities with a high proportion of Black residents,[3,10] and rural counties where a majority of residents are Black or Indigenous have elevated rates of premature death.[11]

The prevalence of hospital financial distress, a leading predictor of rural hospital closure, varies across states and regions; 73% of rural hospitals at high risk of financial distress were located in the South in 2019.[12]

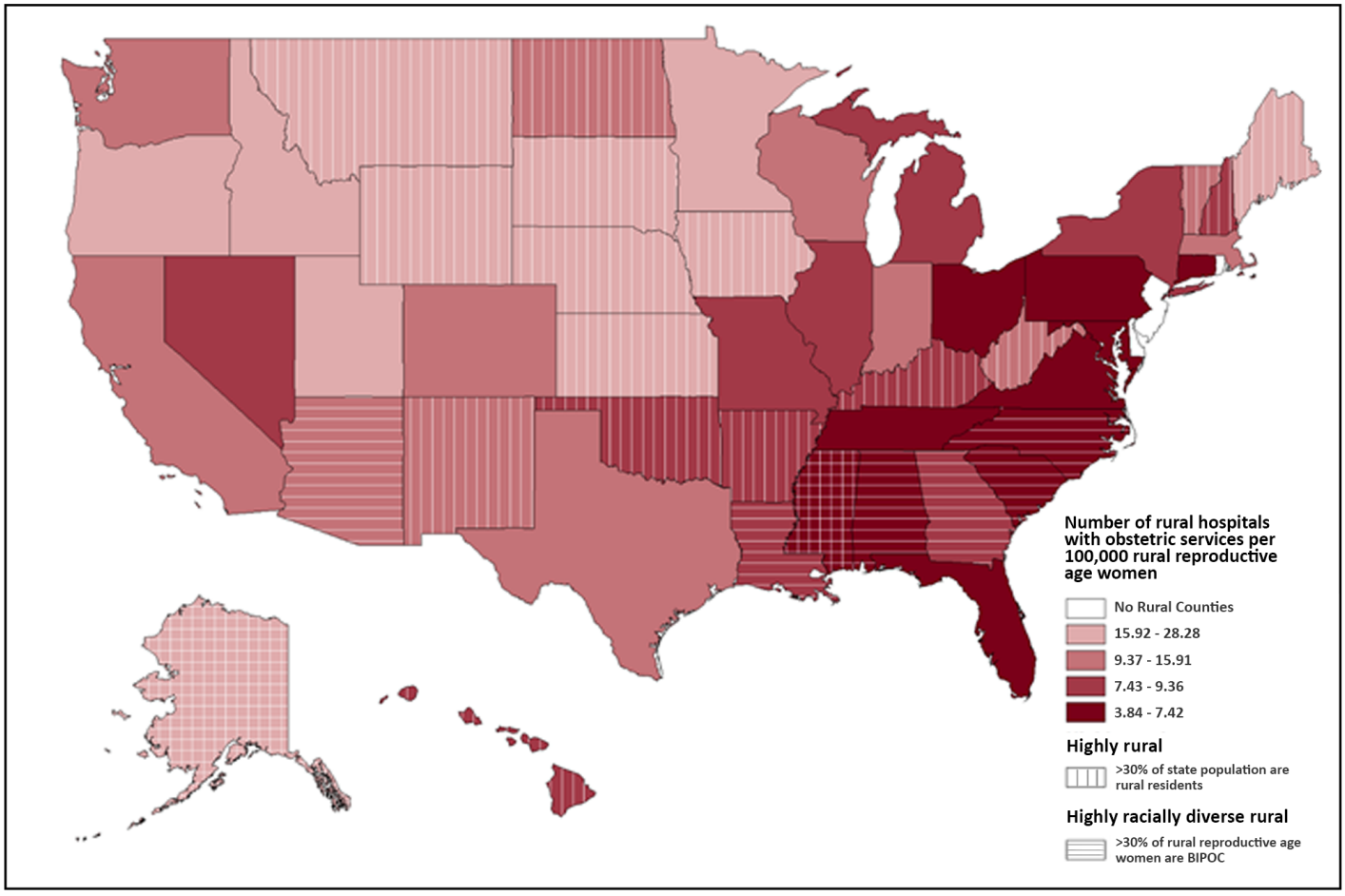
When hospitals face financial difficulty, obstetric services are frequently cut in an attempt to save money, as they are considered "relatively unprofitable" service lines, especially among rural hospitals with relatively few births.[13–15] Medicaid programs fund approximately half of births nationally, with variability across states.[16] Medicaid expansion under the Affordable Care Act (ACA) has improved overall hospital finances and led to reductions in hospital closure in both rural and urban areas.[17] However, Medicaid pays for obstetric services at much lower rates than do private insurers, and many rural hospitals have large shares of Medicaid patients.[16] Given the postpartum coverage extension provision in the American Rescue Plan Act of 2021, which allows state Medicaid programs to extend pregnancy-related coverage beyond the standard 60 days post-childbirth up to one year, the net impact of Medicaid expansions (whether under the ACA or through coverage extension) on obstetric service availability is unclear and may vary across state settings. Medicaid is a key payor for both rural hospitals and for obstetric services, and Medicaid policy is an important factor influencing access to care for rural pregnant patients.

This analysis describes state and regional differences in the availability of hospital-based obstetric services among rural hospitals in the United States in 2018 per rural reproductive age female population; particular attention is given to highly rural and highly racially diverse states.

Approach

Data to identify rural hospitals that did and did not provide obstetric services came from the 2018 American Hospital Association (AHA) Annual Survey.[18] Hospital obstetric service classifications were determined using a previously published method and verified using information from the Centers for Medicare and Medicaid Services Provider of Services File, hospital websites, and news reports of obstetric service closures.[3] Rural hospital location was measured based on the Office of Man-

Figure 1. Access to Hospital-Based Obstetric Services for Rural Residents, Focusing on Highly Rural and Racially Diverse States, 2018



agement and Budget standard definition of metropolitan statistical areas as indicated in the AHA data and validated against the Area Health Resources File. Rural counties included those classified as micropolitan (population center of 10,000-50,000) or non-core (population center of fewer than 10,000 residents).[19] U.S. Census Bureau designations for Northeast, Midwest, South, and West were used to define region.[20]

County-level population data came from the Surveillance, Epidemiology, and End Results (SEER) Program and included the proportion of each state's population that were residents of rural counties as a total of the state population and that were women of reproductive age, including by race.[21] We present the number of rural hospitals with obstetric services per 100,000 female reproductive age (15-49 years old) rural residents by state (i.e., density), distinguishing states classified as highly rural (where >30% of residents live in rural counties) and those whose rural female populations of reproductive age are highly racially diverse (where >30% of rural reproductive age women are Black, Indigenous, and People of Color (BIPOC)).

Finally, because Medicaid is an important funder of hospital and childbirth care in rural areas and among BIPOC women,[16] we examined the status and timing of state adoption of Medicaid expansion under the ACA as tracked by the Kaiser Family Foundation.[22]

Results

There is substantial regional and state-level variability in the number of rural hospitals that offer obstetric services to patients who may need them (Figure 1). Rural hospitals in the South had the lowest density of rural hospitals with obstetric services, with only 7 hospitals per 100,000 rural women of reproductive age compared to 15 per 100,000 in the West (the region with the highest density) (Table). States with the lowest density of rural hospitals with obstetric services available for rural residents who may need them included Florida (3 per 100,000), Connecticut (5 per 100,000), Alabama (5 per 100,000), Virginia (6 per 100,000), and South Carolina (6 per 100,000), while states with the most included Nebraska (28 per 100,000), Alaska (24 per 100,000), Utah (22 per 100,000), South Dakota (22 per 100,000), and Kansas (22 per 100,000).

Of the 17 states classified as highly rural, 29% (n=5) had less than the median density of rural hospital-based obstetric services available (9 per 100,000). These were Mississippi, Kentucky, Arkansas, New Hampshire, and Oklahoma (Figure 2). Of the nine states with highly racially diverse rural reproductive age populations, 78% (n=7) had less than the median density of rural hospital-based obstetric services available. Four of these (44% of the states with highly racially diverse rural populations) had the lowest density of rural hospital-based obstetric services available (3-7 per 100,000) (Figure 3). The seven states were Louisiana, Georgia, and Hawaii, who had less than the median, and Alabama, South Carolina, North Carolina, and Mississippi, the four in the lowest quartile.

There were 11 states across the U.S. that fell within the lowest quartile of rural hospital-based obstetric service density (3-7 per 100,000). Of those 11 states, only three had expanded Medicaid by 2018 (Ohio, Pennsylvania, Maryland) and an additional one (Virginia) has passed Medicaid expansion since 2018. This leaves 64% (n=7) of states with the lowest density of obstetric service availability located in non-Medicaid expansion states.

Figure 2. Access to Hospital-Based Obstetric Services among Highly Rural States, 2018

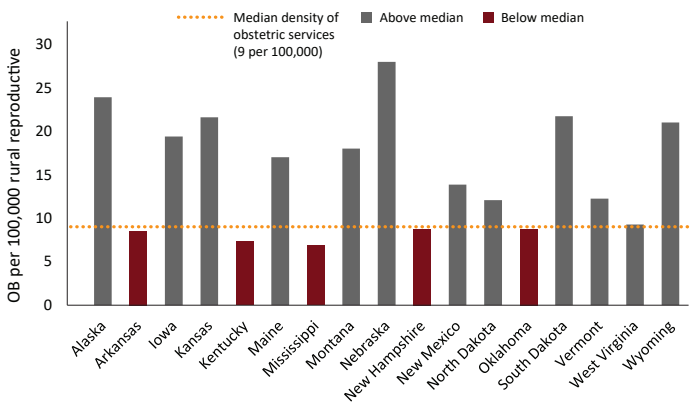


Figure 3. Access to Hospital-Based Obstetric Services among States with Highly Racially Diverse Rural Populations, 2018

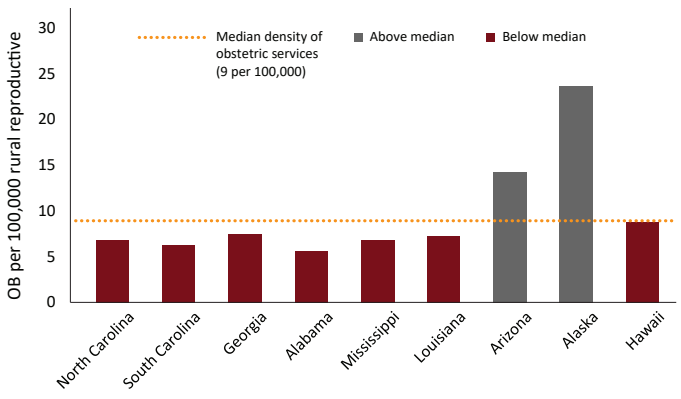


Table. Hospital-Based Obstetric Services for Rural Residents by State and Region, Focusing on Highly Rural and Racially Diverse States, 2018 (continued on p. 5)

Region and State	No. of Rural Hospitals with Obstetric Services	Per 100,000 Rural Reproductive Age Women	Highly rural (>30% reside in rural counties)	Highly racially diverse (>30% of rural reproductive age women are BIPOC)
Northeast	*83*	*9*	*No*	*No*
Maine	18	17	Yes	No
New Hampshire	9	9	Yes	No
Vermont	10	12	Yes	No
Massechusetts	3	15	No	No
Rhode Island	-	-	-	-
Connecticut	2	6	No	No
New York	22	8	No	No
New Jersey	-	-	-	-
Pennsylvania	19	7	No	No
Midwest	*389*	*13*	*No*	*No*
Ohio	35	7	No	No
Indiana	31	10	No	No
Illinois	22	8	No	No
Michigan	29	8	No	No
Wisconsin	43	15	No	No
Minnesota	48	20	No	No
Iowa	48	20	Yes	No
Missouri	26	8	No	No
North Dakota	9	12	Yes	No
South Dakota	20	22	Yes	No
Nebraska	37	28	Yes	No
Kansas	41	22	Yes	No
South	*312*	*8*	*No*	*No*
Delaware	-	-	-	-
Maryland	2	7	No	No
D.C.	-	-	-	-
Virginia	12	6	No	No
West Virginia	13	9	Yes	No
North Carolina	32	7	No	Yes
South Carolina	10	6	No	Yes
Georgia	29	8	No	Yes
Florida	5	4	No	No

**BIPOC: Black, Indigenous, and People of Color*

Table. Hospital-Based Obstetric Services for Rural Residents by State and Region, Focusing on Highly Rural and Racially Diverse States, 2018 (continued)

Region and State	No. of Rural Hospitals with Obstetric Services	Per 100,000 Rural Reproductive Age Women	Highly rural (>30% reside in rural counties)	Highly racially diverse (>30% of rural reproductive age women are BIPOC*)
South	*312*	*8*	*No*	*No*
Kentucky	29	7	Yes	No
Tennessee	21	7	No	No
Alabama	14	6	No	Yes
Mississippi	25	7	Yes	Yes
Arkansas	20	9	Yes	No
Louisiana	12	7	No	Yes
Oklahoma	24	9	Yes	No
Texas	64	10	No	No
West	*203*	*15*	*No*	*No*
Montana	25	18	Yes	No
Idaho	16	17	No	No
Wyoming	18	21	Yes	No
Colorado	22	16	No	No
New Mexico	20	14	Yes	No
Arizona	10	15	No	Yes
Utah	16	22	No	No
Nevada	4	8	No	No
Washington	16	11	No	No
Oregon	20	16	No	No
California	19	12	No	No
Alaska	12	24	Yes	Yes
Hawaii	5	9	No	Yes

Conclusion

There is wide variability in obstetric service availability across rural areas, with the least access concentrated in highly rural, highly racially diverse Southern U.S. states. These are some of the same states with the highest maternal morbidity and mortality rates, the highest rates of rural hospital closures, and those that have not expanded Medicaid.[23–25] This policy brief underscores the need to address the intersection of race and rurality in policies aimed at improving maternity care access.

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For more information, contact Katy Backes Kozhimannil (kbk@umn.edu)

University of Minnesota Rural Health Research Center
Division of Health Policy and Management, School of Public Health
2221 University Avenue SE, #350 Minneapolis, MN, 55414