Exploring Health Center Capacity in Rural Maternity Care Deserts

Key Takeaways/Policy Implications

- Health centers located in rural maternity care deserts have higher rates of early access to prenatal care and higher rates of providers delivering babies than health centers not located in rural maternity care deserts
- Increasing the number of providers in health centers that provide maternal care in rural maternity care deserts could play a critical role in alleviating gaps in access to maternal care and improve outcomes

There is growing evidence of maternal care disparities across the U.S., particularly for populations in rural areas.[1] The majority of counties that lack obstetrician-gynecologists (OB/GYN), certified nurse midwife (CNM) providers, and hospitals providing obstetric care—which are known as maternity care deserts (MCDs)[2]—are located in rural areas. HRSA-funded health centers, organizations that deliver needed health care services to the most vulnerable populations, provided early access to prenatal care to more than 560,000 prenatal patients in 2018 with more than 170,000 deliveries performed by health center providers.[3] Health centers, required to provide prenatal care either directly or via referral, are well positioned to improve maternal health outcomes in rural areas and have the potential to help fill gaps in access to care in rural MCDs. This research explores current and potential health center capacity to provide maternal care and fill care gaps in rural maternity care deserts.

Data & Methods

We first conducted a cross-sectional analysis of county-level data from the Health Resources and Services Administration (HRSA) Area Health Resource File (2019)[4] and Rural-Urban Continuum[5] to identify rural MCDs. While HRSA defines a rural area with Rural-Urban Commuting Area Codes (RUCA) codes 4-10, this analysis follows previous work on maternity care deserts that focuses on the most rural areas.[1-2] Counties were defined as rural if they had a total population of 2,500 to 19,999, were not adjacent to a metropolitan area, or were completely rural (7-9 on the rural-urban continuum). Puerto Rico and Pacific Island territories were not included in MCD analysis, and Hawai'i did not have any designated rural MCDs. Next, using data from the HRSA Data Warehouse, Health Center Program (HCP) delivery sites (2018) were mapped on rural MCDs.[6] Our analysis began with 11,578 HCP delivery sites (n= 1,279 awardees).

HCP delivery sites located within rural MCDs were designated as Priority Health Centers (PHCs). Measures from the Uniform Data System (UDS) related to maternal health were explored for PHCs and compared against non-PHCs and national benchmarks, including number of prenatal patients, number of prenatal patients who delivered with a health center provider, percent low birth weight, and percent early (first trimester) access to prenatal care. We ran t-tests to explore significant statistical differences.

Table 1. Priority Health Center (PHCs) Characteristics

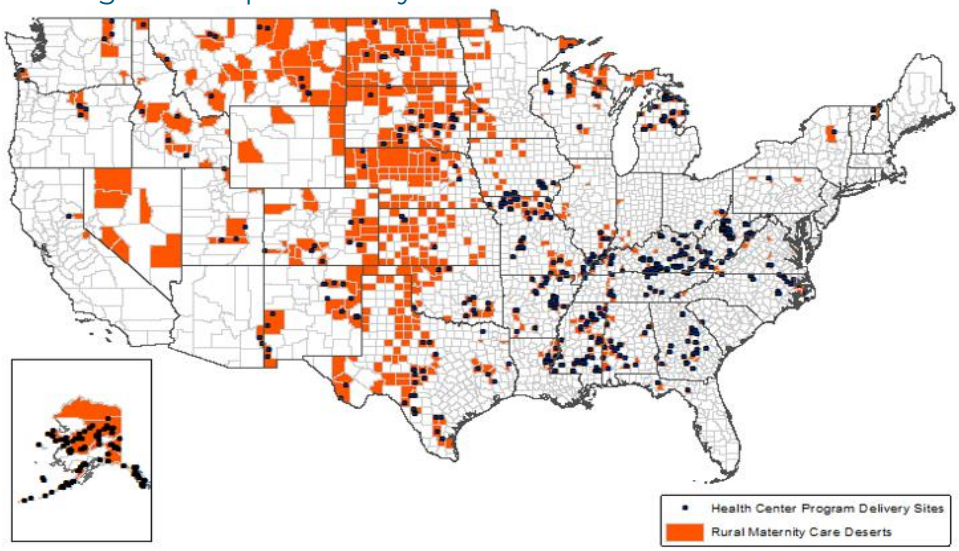
Health Centers	# of HCP Delivery Sites (Awardees)	Average # of Patients per Awardee (Total patients)	Average # Prenatal Patents per Awardee (Total patients)	Average # Patients Delivering per Awardee (Total patients)	% Prenatal Patients Delivering	% Early Access to Prenatal Care	% Low Birth Weight
All	11,578 (1,264)	22,745 (27,485,207)	441 (557,281)	234 (296,284)	53.2%	73.9%	8.0%
Non-PHCs	10,959 (1,081)	22,424 (24,240,710)	476 (526,477)	253 (151,674)	53.1%	73.5%	7.9%
PHCs	785 (198)	16,965 (3,358,997)	188 (37,263)	103 (20,432)	54.6%	78.4%*	9.1%
AK PHCs	109 (16)	3,898 (62,373)	68 (1,091)	39 (619)	56.7%	79.0%	10.2%

*Early Access to Prenatal Care is significantly higher for PHCs compared to non-PHCs at p<.001

Results

We identified 785 PHCs (198 awardees) in 311 rural MCDs. Eleven of these PHCs had no prenatal patients and eight PHCs had at least one prenatal patient but did not have a patient that delivered

Figure 1. Map of Priority Health Centers and Rural MCDs



with a health center provider. Figure 1 displays the geographic distribution of MCDs and PHCs. The majority of PHCs are in the eastern half of the U.S., yet large numbers of MCDs in the central and western U.S. are without health centers, including the entire states of Nevada, Wyoming, and Indiana. Alaska is a notable exception, as it has PHCs throughout the state providing care in MCDs. Table 1 displays the characteristics of PHCs compared to non-PHCs. Overall, in 2018, PHCs in MCDs had 37,263 prenatal patients, 20,342 (54.6%) of whom delivered with a health center provider, which was higher than non-PHCs, but not significantly different. PHCs had significantly higher rates of prenatal patients with early (first trimester) access to care (78.4% vs. 73.5%,

p<.001), though higher rates of low birth weight babies was not statistically significant (9.1% vs. 8.0%, both unadjusted). While more than one-half of MCDs (53.7%) did not have any health center presence, the majority of MCDs had at least one health center in adjacent counties.

Conclusions

Health centers fill a critical role in providing maternal care in rural MCDs, as evidenced by significantly high rates of early access to prenatal care for PHCs when compared to non-PHCs and providers performing over half of deliveries. However, PHCs have higher rates of low birth weight babies (though not statistically significant) and more than one-half of rural MCDs do not have any health center presence.

Opportunities exist for health centers to improve access and quality of maternal care. Additional care delivery sites and partnerships with other maternal and child health care providers can improve access to prenatal care, address opportunities to decrease low-birth weight babies in MCDs. Future research includes case studies on successful programs, the exploration of health center staffing data, and the potential role of family physicians to fill gaps. Further, replicating this study using a more inclusive definition of rural (for example metro vs. non-metro) and exploring differences in low birth weight for rural MCDs compared to rural areas that are not MCDs could highlight gaps in access to care.

References

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