

Mapping the Location of Health Centers in Relation to ‘Maternity Care Deserts’: Associations with Utilization of Women’s Health Providers and Services

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ISSUE

We hypothesized that health centers close to a desert versus those that were not would provide higher numbers of family physician and nurse practitioner visits compared to obstetrician-gynecologist and nurse-midwife visits. We based our hypothesis on prior research that shows that: (1) obstetrician-gynecologists tend to establish their practice in higher resourced, urban areas; (2) family physicians, who are trained in obstetrics, are more likely to perform deliveries the closer they are to a rural area; and (3) nurse practitioners, who are trained women’s health providers and licensed to provide prenatal care, more often staff and even lead clinics where permitted by state law, which is in harder to reach areas of the country.

METHODS

The sample consisted of federally-funded health centers that reported data to the federal government in 2017 (n=1,261) and all counties in the United States and Puerto Rico (n=3,234). We combined data from the 2017 American Hospital Association Survey, the 2017 Area Health Resource Files, and the 2017 Uniform Data System. In this study, we used geographic information system software to calculate and map the shortest straight-line distances between community health centers and ‘maternity care deserts.’ We then employed ordinary least squares regression to determine the association between health center distance to a desert, utilization of maternity-related health care services at health centers, and other health center characteristics, controlling for county-level factors. Utilization was operationalized as the total number of visits to obstetrician-gynecologists, certified nurse midwives, family physicians, and nurse practitioners who were health center staff in 2017. We also examined the total number of deliveries performed by health center staff. We compared these types of utilization between health centers located closer to deserts and those that are farther away, controlling for health center and county characteristics.

FINDINGS

Our results confirm our hypothesis regarding visits provided by nurse practitioners but are more mixed for visits provided by family physicians. Key findings include: 1) health centers close to deserts had more nurse practitioner visits than those that were not; 2) there appeared to be a dose-response effect under which nurse practitioner visits were almost three times higher at health centers located near deserts that lacked both outpatient and inpatient access to maternity care than at health centers located near deserts that did not have one or the other type of access; 3) regardless of a location near a desert, as the number of women patients of reproductive age increased by 100, then visits statistically increased across all but two utilization measures (by a total of 121 obstetrician-gynecologist visits, 69 nurse midwife visits, 15 prenatal care visits, and three deliveries performed by health center staff), controlling for other important factors related to utilization.

DISCUSSION

More research is needed to determine how best to target resources to these limited access areas. Still, this study suggests that health centers located closer to ‘deserts’ and nurse practitioners working at these comprehensive, primary care clinics have an important role to play in providing access to women’s health and maternity care services.

Key Words: maternity care dessert, women’s health