Maternal Care in the Northeast United States: Insights from Census Data

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Care Classifications

Maternity Care Desert - county without hospital or birth

center and has no obstetric providers

Limited Access to Care - 1 or fewer hospitals or birthing

centers with obstetric care, very few obstetric providers, or a

high proportion of women without insurance

(March of Dimes, n.d.)





Classifications Cont.

Moderate Access to Care - Limited care but with

adequate health insurance coverage

Access to Care – 2 or more hospitals/birthing centers

or at least 60 obstetric care providers

(March of Dimes, n.d.)





Introduction

- 2 million women in maternal care deserts (March of Dimes, n.d.)
- 3.5 million with moderate or limited access (March of Dimes, n.d.)
- Impacts: higher rates of pregnancy related deaths (Fontenot et al., 2024), higher infant mortality (Waits et al., 2020), lower birth-weight (Waits et al., 2020), more preterm births (Darivemula et al., 2024)





Influences on Accessing Care

- Higher population density, more access (Handley et al., 2021)
- Household wealth (Nath et al., 2021)
- Maternal education, race and ethnicity (Maru et al., 2021)
- Employment influences insurance and income (Admon et al., 2023; Nath et al., 2021)
- Higher unemployment rates associated with worse birth outcomes (Barrera et al., 2022)





Methods

- Access classification from March of Dimes
- County Census Data (US Census Bureau, 2025)
 - Population, number of businesses, employment rate, education levels, median income, number of housing units, number of households, uninsured population, Hispanic or Latino population, land size





Results

• 217 counties: 8 maternal care deserts, 1 limited

access, 17 moderate access

- States with full access: CT, MA, ME, NH, RI
- PA- 17 of 67 do not have full access to care
- NY-7 counties, NJ and VT 1 each





Results

Median Values by Maternity Care Status

Values are color-coded relative to range within each variable







Results

Effect Size Comparison (Cohen's d)

Red = positive effect (first group > second), Blue = negative effect (first group < second)

Businesses	0.55 (Medium)	0.62 (Medium)	1.62 (Large)	
Education Level	1.26 (Large)	1.46 (Large)	0.64 (Medium)	
Employment Rate	0.92 (Large)	2.26 (Large)	1.18 (Large)	
Hispanic/Latino Pop.	0.40 (Small)	0.42 (Small)	0.31 (Small)	Cohen's d
Households	0.58 (Medium)	0.70 (Medium)	1.69 (Large)	1
Housing Units	0.56 (Medium)	0.69 (Medium)	1.71 (Large)	0
Income	0.69 (Medium)	0.94 (Large)	0.75 (Medium)	-1 -2
Land Size	0.11 (Negligible)	0.23 (Small)	0.24 (Small)	
Population	0.56 (Medium)	0.68 (Medium)	1.63 (Large)	
Uninsured Rate	-0.90 (Large)	-0.50 (Medium)	0.25 (Small)	
Access vs Limited Access vs Desert Limited vs Desert				
Comparison				





Discussion

- Factors that predict lower rates of accessing maternal care are significantly lower in areas with limited access to care than full access
- Hospital closures are associated with adverse effects on the economy, which may explain why there are less businesses in these regions (Mullens et al., 2023)
- Help us understand the challenges faced when attempting to increase access and use of these services





Future Directions

Public health initiatives to increase access in rural

areas

• Potential to predict future areas that will have

limited access to care based on risk factors





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