

Determinants of Hospital Obstetric Unit Closures in the United States 2002-2013: Loss of Hospital Obstetric Care 2002-2013

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Abstract : Background/Objective: The loss of obstetric services has been a pressing concern in urban and rural areas nationwide. This study aims to determine factors that contribute to the loss of obstetric care through closures of a hospital or obstetric unit. Methods: Data from 2002-2013 American Hospital Association annual surveys were used to identify hospitals providing obstetric services. We linked these data to Medicare Healthcare Cost Report Information for hospital financial indicators, the US Census Bureau's American Community Survey for zip-code level characteristics, and Area Health Resource files for county-level clinician supply measures. A discrete-time multinomial logit model was used to determine contributing factors to obstetric unit or hospital closures. Results: Of 3,551 hospitals providing obstetrics services during 2002-2013, 82% kept units open, 12% stopped providing obstetrics services, and 6% closed down completely. State-level variations existed. Factors that significantly increased hospitals' probability of obstetric unit closures included lower than 250 annual birth volume (adjusted marginal effects [95% confidence interval]=34.1% [28%, 40%]), closer proximity to another hospital with obstetric services (per 10 miles: -1.5% [-2.4, -0.5%]), being in a county with lower family physician supply (-7.8% [-15.0%, -0.6%]), being in a zip code with higher percentage of non-white females (per 10%: 10.2% [2.1%, 18.3%]), and with lower income (per \$1,000 income: -0.14% [-0.28%, -0.01%]). Conclusions: Over the past 12 years, loss of obstetric services has disproportionately affected areas served by low-volume urban and rural hospitals, non-white and low-income communities, and counties with fewer family physicians, signaling a need to address maternity care access in these communities.

Keywords : access to care, obstetric care, service line discontinuation, hospital, obstetric unit closures

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