

PhD Dissertation Defense

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Title: An Epidemiological and Geographic Analysis of Healthcare Provider Choice in Urban Bo, Sierra Leone

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ABSTRACT

The built environment plays a critical role in people's ability to access healthcare services. The goal of this study was to explore the factors that affect women's selection of acute (short-term) and inpatient (long-term) healthcare providers in an urban area of a low-income country. Geographic and epidemiologic methods were used to analyze data collected from more than two thousand women from across the city of Bo, Sierra Leone, in West Africa, in 2010 and 2011. The insights gained from this analysis, along with a comprehensive examination of the literature on maternal and child healthcare access, were applied to a consideration of the policy implications for Bo and to a broader analysis of the factors influencing healthcare provider selection.

A dynamic healthcare marketplace exists in urban Bo. The participating women identified 26 pharmacies, clinics, and hospitals as the facilities they prefer when seeking acute care. Nine of these facilities provide inpatient services and are preferred by mothers when in need of overnight care for themselves or their children. Although residences in Bo are on average only about 0.3 km from a healthcare facility providing outpatient services and 0.9 km

from an inpatient facility, women travel on average 3.0 km to access care for themselves or their children. Bypassing of facilities near to the home is very common, and the majority of women bypass private (usually nonprofit) facilities so that care can be received from the city's only large government hospital, which is located in the central part of the city. The strong preference for the government referral hospital is likely related to this hospital offering the most advanced diagnostic and therapeutic options within Bo city limits and to a national policy implemented in April 2010 that made most maternal and child health care free at government healthcare facilities.

These observations and others identified from a systematic review and synthesis of the literature inspired a new framework for categorizing the factors that affect healthcare provider selection: the EPIC model. The four components of the EPIC model include (1) Environmental factors such as travel distance and road availability, (2) Provider factors such as staffing and equipment availability, (3) Individual factors such as sociodemographic characteristics, and (4) Cost factors such as the price of healthcare services. In Bo, the built environment, represented by the E in the EPIC model, must be considered by individuals and families as part of the decision about healthcare provider selection because private transportation has to be purchased out-of-pocket when traveling beyond easy walking distance for care. Improving access to healthcare services in Bo will require expanding the diagnostic and treatment services available in the city, especially for chronic disease management, and ensuring that road networks and a public transportation system are available to facilitate access to these services.