

A geospatial database of close-to-reality travel times to obstetric emergency care in 15 Nigerian conurbations

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Abstract

Travel time estimation accounting for on-the-ground realities between the location where a need for emergency obstetric care (EmOC) arises and the health facility capable of providing EmOC is essential for improving pregnancy outcomes. Current understanding of travel time to care is inadequate in many urban areas of Africa, where short distances obscure long travel times and travel times can vary by time of day and road conditions. Here, we describe a database of travel times to comprehensive EmOC facilities in the 15 most populated extended urban areas of Nigeria. The travel times from cells of approximately 0.6×0.6 km to facilities were derived from Google Maps Platform's internal Directions Application Programming Interface, which incorporates traffic considerations to provide closer-to-reality travel time estimates. Computations were done to the first, second and third nearest public or private facilities. Travel time for eight traffic scenarios (including peak and non-peak periods) and number of facilities within specific time thresholds were estimated. The database offers a plethora of opportunities for research and planning towards improving EmOC accessibility.