

Accessibility to Dialysis Unit in Kuwait Urban Area by Using Geographic Information System

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Abstract

The study of such a phenomenon, whether human or physical from their spatial perspective, is the most prominent characteristic of the geographic studies, as it focuses on analyzing the spatial relationship between various places. This study aims to understand the geographical distribution of dialysis units in the State of Kuwait. This study adopts the descriptive and analytical approach from a geographical perspective to describe the dialysis units spatially, while the analytical method uses GIS programs (ArcGIS 10.8), using (Network Analysis), and specifically (Service Area Tool) to determine the service areas of the dialysis units. The results of the study found that the southern districts in the urban area suffer from a scarcity of dialysis units, while the residential areas located within the administrative boundaries of Al-Asmiah governorate achieve self-sufficiency with effective service coverage at a range of 6 km, and Farwaniya governorate served with only one dialysis unit located in the Farwaniya Hospital on despite it has the highest population density. In conclusion, the study found that the geographical distribution pattern is not commensurate with the housing density of the state's governorates.

Keywords: Dialysis, Geographic information system, Urban Planning, Medical geography, Health care