

Health Access in Pakistan

A Density Analysis of Settlement and Health Facility Access in Rural and Urban Areas

Introduction

Pakistan has struggled to provide quality healthcare to its citizens for many decades. A large population, remote rural areas, and a notoriously small health spending budget (approximately 14%-15% per year) has ensured uneven and sparse healthcare provision throughout the country. This means that urban areas have excellent access to healthcare and have private and public health facilities including more specialized hospitals that deal with specific medical needs. More rural parts of Pakistan are then limited by poor publicly provided healthcare and people often have to travel to larger towns or cities within their districts, and often to a major city that is days away to get adequate medical treatment for more serious health problems.

This analysis maps the concentration of settlements and health facilities in Pakistan. Therefore, in order to illustrate this inequity in health access, this analysis mapped two major urban areas (Karachi and Lahore) and two extremely poor rural areas (Tharparkar and Lodhran) in Pakistan. The study chose two provinces, Punjab and Sindh, which are the most populous and identified two study areas each (one rural, one urban) per province.



Shaukat Khanum Memorial Hospital
Lahore, Pakistan
Source: shaukatkhanum.org

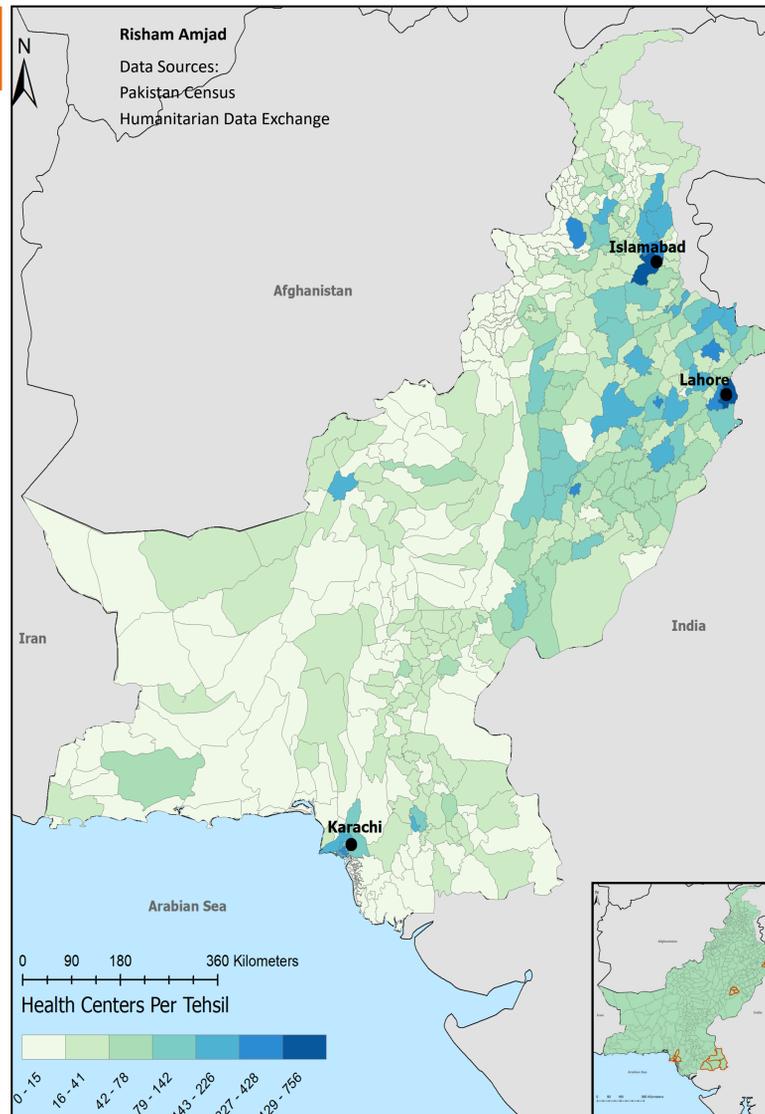


Figure 1. Health Facilities in Pakistan per Tehsil. The inset identifies the four study areas mapped in this analysis.

Results

Figure 1 shows the number of health facilities per tehsil for all of Pakistan in order to provide an overview of health access in the country.

Figure 2a maps health facility density in Lahore (the capital of Punjab province and the second most populous city in Pakistan).

Figure 2b maps settlement density in Lahore and finds that they are roughly located in the same areas as health facilities and radiate outward throughout the city. Health access is not a problem in a well-connected and accessible urban area.

Figure 3a shows that population density is spread throughout the Karachi tehsils and moreover, shows a concentration of people in Malir (some parts of this tehsil are extremely poor and are considered slums) that have no accompanying health facility access.

Figure 3b maps health facility access in Karachi (the most populous city in Pakistan with approximately 17 million people). Health facilities are concentrated toward the coastal boundary of the city which was the earliest settled and the wealthiest.

Figure 4a maps health facility density in Lodhran (located in Punjab). The Lodhran region in South Punjab has one of the lowest Human Development Index (HDI) scores in Pakistan. Health facilities are concentrated in two places in the district.

Figure 4b maps the accompanying settlement density for the tehsils in Lodhran. We see that the population is spread out densely throughout the district and is concentrated in an area where there aren't many accompanying health facilities.

Figure 5a maps health facility access in the tehsils making up the Tharparkar district. Containing the Thar Desert, it is a poor and remote rural area. It too, has one of the lowest HDI scores in Pakistan which can be shown by the low health facility density numbers for this district.

Figure 5b shows that the settlement density is spread out throughout the tehsils and far outpaces the accompanying health facilities in Tharparkar

Methods

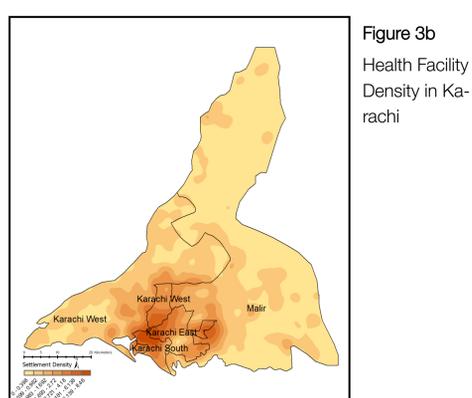
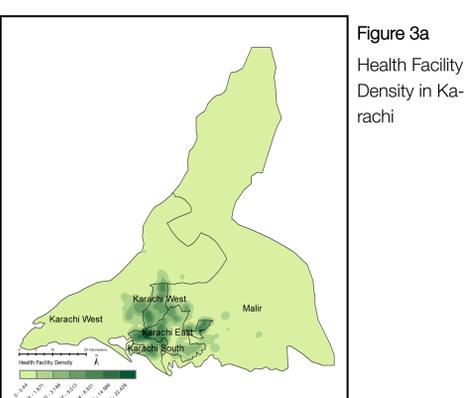
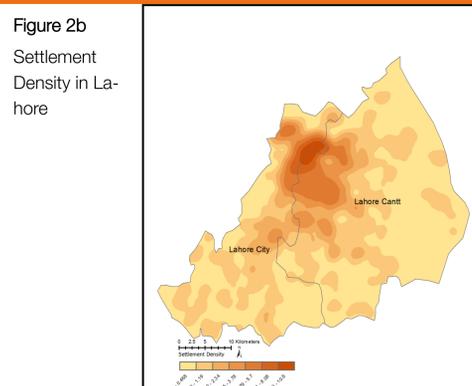
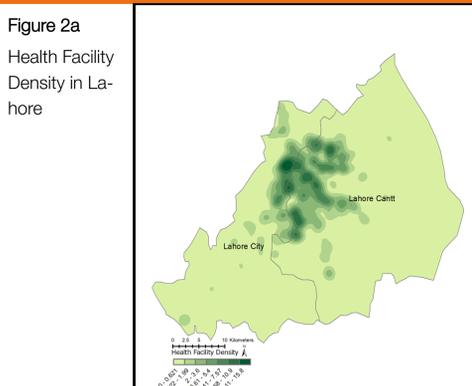
Spatial data availability for Pakistan is limited. Therefore, health facility data was significantly cleaned in order to include only health facilities that would provide direct medical care. Furthermore, to undertake granular data analysis, this study looked at population and settlements by tehsil. A tehsil is an administrative division that is an area of land with a city or town that serves as its administrat-

-ive center with possible additional towns and some villages. A tehsil is an administrative division that is an area of land with a city or town that serves as its center with possible additional towns and some villages. It can be understood as a sub-district. This study had four geographic areas of interest and used location queries to identify settlement and health facility density per tehsil. Multiple tehsils were chosen to encompass the entire district/division area. Kernel Density was run for each of the four study areas for settlements and health facilities.

Conclusion

Health access in Pakistan is a problem. The spatial analysis in this study has been helpful in mapping out the unequal spread of access that is a reality for the vast majority of Pakistanis.

Urban



Rural

