

Geographic Access of Indian Health Service Facilities for Native American's in New Mexico

What is an IHS Facility?

The Indian Health Service (IHS) facilities serve as healthcare resource for Native communities across the United States. It was established to ensure access to ample, culturally sensitive medical services and offers a range of healthcare provisions. These facilities promote wellness, prevent disease, and address the unique healthcare needs of indigenous people.

Research Question

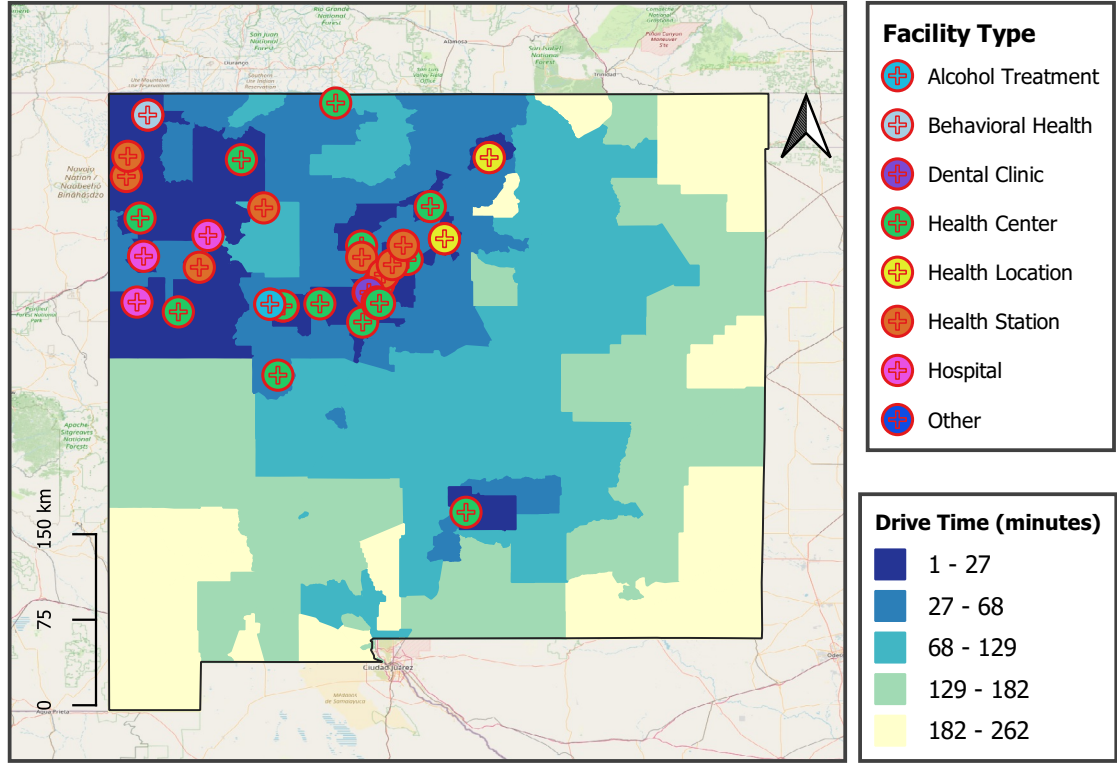
The research question focuses on evaluating the geographic accessibility of Indian Health Service (IHS) facilities for Native American populations using Origin-Destination (OD) Matrix Analysis. The research seeks to provide valuable insights into the healthcare landscape for Native Americans in New Mexico, ultimately contributing to efforts aimed at improving healthcare equity and access for marginalized populations.

Introduction

This study focuses on New Mexico to assess the geographic accessibility of IHS facilities using Origin-Destination (OD) Cost Matrix analysis.

Methods

Population census data and IHS facility information for New Mexico were gathered and processed using spatial analysis tools in R and ArcGIS Pro. This involved creating maps, OD matrices, and visualizations to analyze travel times and distances between populations and IHS facilities.



Results

The geographic analysis unveils clear accessibility trends across New Mexico. Areas surrounding IHS facilities, particularly in the northwest, boast shorter drive times, while drive times escalate with distance from each facility. The map indicates aqua-blue regions (68-129 minutes) around facilities, contrasting with green and yellow areas (129-262 minutes) where facilities are sparse. Facility types vary, with health centers predominating among 41 IHS facilities. The bar graph illustrates population distribution relative to facility distance and drive time, with notable deviations from expected drive times for certain distance brackets, suggesting nuanced accessibility challenges.

Discussion

The analysis highlights stark healthcare disparities among Native Americans in New Mexico. While some regions near clustered IHS facilities enjoy better access, others face significant challenges, with many enduring lengthy journeys. The bar graph underscores that a large proportion resides far from these facilities, revealing pervasive healthcare discrimination. Discrepancies between drive time and distance quartiles underscore the complex factors at play beyond physical distance. Additionally, the discussion emphasizes the diverse services offered by IHS facilities and the financial strain on individuals seeking care elsewhere, underscoring the urgent need for increased funding to improve healthcare equity for Native communities.

	Access Measure	Percent of Native Population
Distance (km)	1.34 - 52.59	14.81%
Drive Time (minutes)	0.53 - 75.73	15.16%
Distance	52.59 - 104.93	18.41%
Drive Time	75.73 - 167.67	19.22%
Distance	104.93 - 164.26	25.23%
Drive Time	167.67 - 260.65	23.42%
Distance	164.26 - 212.78	22.23%
Drive Time	260.65 - 353.15	25.77%
Distance	212.78 - 274.59	12.15%
Drive Time	353.15 - 455.70	10.44%
Distance	274.59 - 580.56	7.17%
Drive Time	455.70 - 977.63	5.99%

