

Accessibility to Hospitals for Seniors in Virginia

Jenny Choi, Scarlett Hwang, Hyeong Suk Kim, Seohyung Lee | University of Washington Department of Geography, GEOG 461: Urban GIS

Introduction

This project displays the geographic accessibility of seniors, 65 years old and older, to hospitals within Virginia State. By analyzing the map, we detect the counties with high and low accessibilities and propose an accessibility analysis

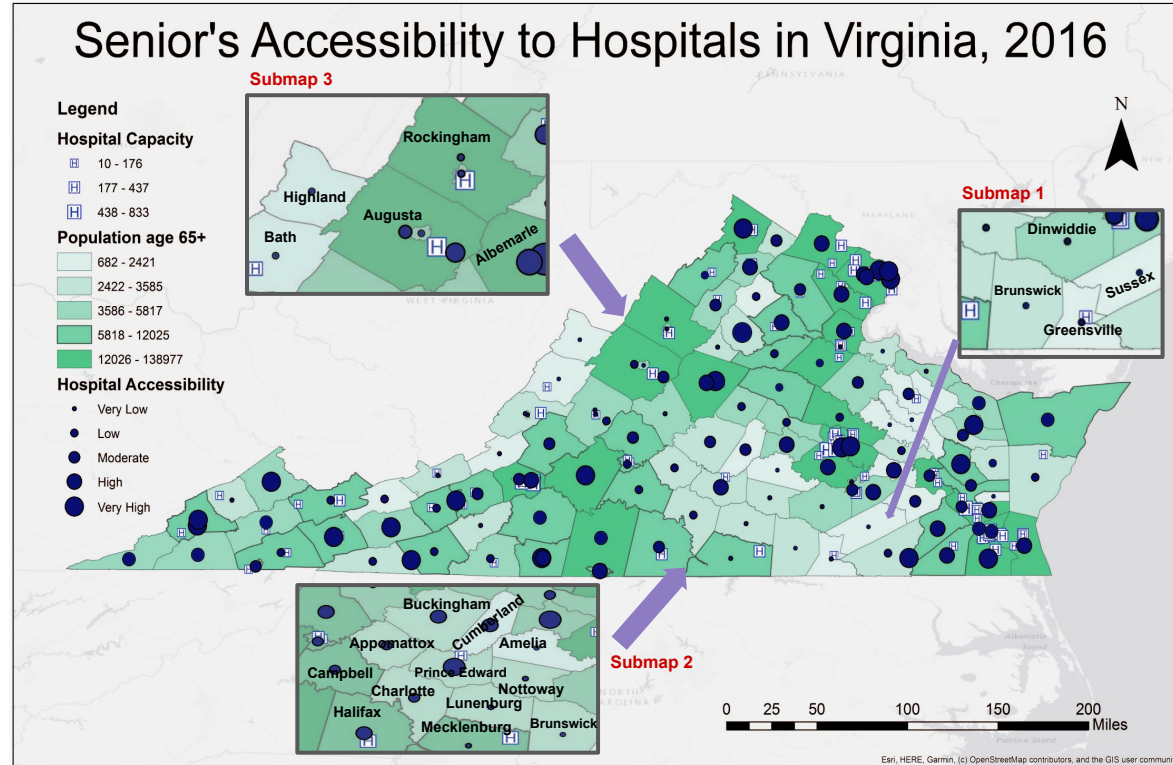
Methodology

The population aged 65 and over in Virginia data is joined with county boundary file from TIGER product under Census Bureau.

The road network data is converted to network database using ArcCatalog. Our accessibility score is the result of the Origin-Distance Matrix calculation of the distance between centroids of each county and the hospitals with various capacity.

Findings

- Noticeable clusters of the far east, north and west of the state with aggregated senior population, more hospitals with larger capacity and higher accessibility
- Low accessibility and capacity of hospital and low aged population in the middle region near Dinwiddie, Brunswick, Sussex and Greenville (**Submap 1**)
- Senior population near Charlotte, Halifax, Prince Edward, Mecklenburg and Appomattox areas who needs more frequent medical attention is underserved even with a number of hospitals within the regions (**Submap 2**)
- County near Augusta, Rockingham and Albemarle has relatively low hospital accessibility and capacity compared to their high aged population (**Submap 3**)



References

- VA boundary Data:** TIGER Product Under Census Bureau
- Census/Demographic Data:** American Community Survey (S0101) "AGE AND SEX"
- Hospital Data:** Virginia Economic Development Partnership GIS Open Data
- VA County Road Network Data:** TIGER Product Under Census Bureau